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UNIVERSITY OF ALBERTA

THE DEVELOPMENT OF A SOCIAL INFORMATION-PROCESSING MODEL FOR EXAMINING ADOLESCENT PARASUICIDE

by

PHILOMENA MCKENZIE MORTENSEN ©

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE

OF DOCTOR OF PHILOSOPHY

DEPARTMENT OF EDUCATIONAL PSYCHOLOGY

EDMONTON, ALBERTA

SPRING, 1990

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Dedication

To Paul, my family, and my friends for their unwavering support.

Abstract

An estimated 10,000 adolescents "attempted suicide" in Alberta, Canada in 1988. The magnitude of the problem of parasuicide makes salient the need for prevention and intervention strategies. The thrust of the present research was to develop a social information-processing model which could be used to examine how a specific solution, such as parasuicide, is chosen over other possible solutions in a problem situation. The vast majority of research examining adolescent suicidal behaviors has focused on the long- and short-term factors leading up to the crisis event, but there is a void in the literature regarding the problem-solving process following the crisis event. It was believed that by focusing on the problem-solving process one might be able to explain why disturbed adolescents do or do not engage in parasuicidal behaviors, as well as why some "low-risk" adolescents engage in parasuicide.

Based upon an integration of the relevant literature, a preliminary social information-processing model was developed. In order to ascertain the appropriateness of the model and to gain additional information that could be used to modify it, two samples of adolescent females completed instruments and were interviewed. The first sample consisted of ten individuals who had intentionally taken a low lethality drug overdose, and the second consisted of a comparison group of ten individuals with no history of parasuicide. A multiple case study approach was used to analyze the data, and modifications of the preliminary social information-processing model were made based on the information obtained from the analyses.

Processes involving the encoding and retrieval of information from memory play a central role in the model and schema theory provided a useful framework for explaining these processes. Mediating variables that could influence the problem-solving process are discussed and three detailed case illustrations are provided to exemplify the components of the model. Using the framework outlined in the dissertation, prevention approaches are recommended and suggestions for future research endeavors are offered.

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I. INTRODUCTION

An estimated 10,000 adolescents attempted suicide in Alberta in 1988 (Ramsay, Tanney, Tierney, & Lang, 1988). Follow-up studies indicate that between 10% and 14% of individuals who make a suicide attempt will eventually die from a subsequent suicidal behavior (Diekstra, 1989b). The magnitude of the problem of self-destructive behavior makes salient the need for prevention and intervention strategies. Diekstra (1985) stated that we can no longer remain passive to this epidemic which is affecting more and more of our young people.

Studies in Great Britain were among the first to document an increase in attempted suicide (Diekstra, 1982b). Much of this research originated from the Regional Poisoning Treatment Centre in Edinburgh. The Edinburgh team has produced data on "first-ever" self-poisoners which revealed that the greatest increase in this form of suicidal behavior has occurred in young females ages 15 to 19 (Kreitman, 1977). In fact, it has been estimated that between 70% and 90% of all adolescent suicide attempts are made by females (Garfinkel, Froese, & Hood, 1982; Goldacre & Hawton, 1985; Hawton, Osborn, O'Grady, & Cole, 1982; Kotila & Lonnqvist, 1988).

Several theories have been advanced to explain adolescent suicidal behaviors, but the research results have been conflicting with no single theory being able to satisfactorily explain the etiology of many self-destructive behaviors of the young. Spirito, Overholser, and Stark (1989) concluded that "suicidal behavior seems equally likely to occur in adolescents presenting with a variety of problems regardless of their psychiatric status or background" (P. 221). It appears, then, that existing explanations of suicidal behavior have not been very helpful in explaining why one person resorts to these behaviors while another person does not. According to Jacobs (cited in Bagley, 1975), what is needed is either a new perspective or the reinstitution of an old and untried one. One approach might be to focus, not on why some adolescents engage in suicidal behaviors, but on why the majority of distressed adolescents do not engage in suicidal behaviors. Maris (1985) recognized the possibility of this approach when he stated that "it occurs to me that we might have the question *backwards*. That is, one very salient question no one, to my knowledge, has asked about young people is why so *few* of them suicide" (p. 94).

To date, most of the suicidal literature has been concentrated around the psychiatric and psycho-social histories of suicidal individuals. Until recently the cognitive component has not received the attention it merits. There is a void in the literature regarding the decision-making processes an individual uses when deciding whether or not to engage in a suicidal behavior, and consequently our understanding of suicidal behaviors cannot be complete. It is believed that by focusing on the decision-making process, not only might one be able to explain why disturbed adolescents do or do not engage in suicidal behaviors, but one might also be able to explain why some "low-risk" adolescents engage in suicidal behaviors, an area that has never been explored.

The thrust of the present research was to examine, from a social information-processing perspective, how an individual makes the choice to engage in a suicidal behavior. This is not to understate the importance of long- and short-term factors leading up to the crisis event (e.g., Adam, Bianchi, Hawker, Nairn, Sanford, & Scarr, 1978; Adam, Bouckoms, & Streiner, 1982; Stephens, 1985; Teicher & Jacobs, 1966). Instead, it is hoped that this approach will add to our knowledge so that we will eventually be able to explain why some individuals engage in suicidal behaviors while other individuals with similar backgrounds do not.

A. Nature of the Study

Suicidal behavior has often been described as a method of problem solving (e.g., Appelbaum, 1963; Baechler, 1979; Gresham & Lemanek, 1986; Levenson & Neuringer, 1971; Maris, 1971; Shneidman, 1985). The position taken in this study was also to view a suicide attempt as a problem-solving method. For the purposes of this dissertation, a decision was made to focus only on those individuals who "attempt suicide" without intending death, as they form the largest group of suicide attempters (Hawton, 1982; McLeavey, Daly, Murray, O'Riordan, & Taylor, 1987). It was hypothesized that most individuals who attempt suicide without intending to kill themselves utilize a defective approach to problem solving during the crisis period (Mann & Janis, 1982) and, therefore, are more likely to choose a maladaptive behavior in the problem situation.

The intent of this research was to develop a social information-processing model which could be used to examine how a specific solution, such as "attempting suicide", is chosen over other possible solutions in a problem situation. Models have been developed to explain how an individual comes to a suicidal crisis (e.g., Bonner & Rich, 1987; Clum, Patsiokas, & Luscomb, 1979, Mahoney, 1983), but a model has not been developed to explain the actual decision-making process. Why the use of a model? According to Lachman and Lachman (1986), "not only does metaphorical thinking initiate, guide, and support the reference-fixing process in science, it supports the introduction of theoretical concepts and formalisms. The result is the formulation and communication of original conceptions and the construction of new scientific theory" (p. 31). Despite a decade of social problem-solving research, the field is largely devoid of attempts at model building (Rubin & Krasnor, 1986).

Suicidal behavior is diverse with multiple origins. A social information-processing approach is not the only way to conceptualize suicidal behavior. A variety of alternative approaches have made significant contributions to the understanding of suicidal behaviors. Despite these contributions, no single approach can account for all facets of human behavior. It is important to remain open to the contributions of other conceptual approaches and to strive for their meaningful integration (cf. Ingram & Kendall, 1986).

B. Research Method

Recently a number of studies have examined problem-solving skills in relation to suicidal behaviors (e.g., Asarnow, Carlson & Guthrie, 1987; Cohen-Sandler, 1982; Goodstein, 1982; Linehan, Camper, Chiles, Strosahl, & Shearin, 1987; McLeavey et al., 1987; Schotte & Clum, 1987; Spirito et al., 1989). Most studies have explored the relationship between social problem solving and suicidal behaviors at the level of alternative thinking and means-ends thinking. However, the social information-processing literature indicates that there are more stages in social problem solving than the above mentioned ones (e.g., Dodge, 1986; D'Zurilla & Goldfried, 1971; Rubin & Krasnor, 1986; Spivack & Shure, 1974). An integration of the stages outlined in the social information-processing literature, with additional variables from the social psychological literature, resulted in the identification of a number of variables that are proposed to be involved in the social problem-solving process. Most of these variables have been independently discussed within the suicidal literature, but a study has not been carried out to determine the interaction between these variables, nor have they been discussed within the context of a social information-processing model. These variables are:

1. Perceived problem-solving ability (e.g., Bonner & Rich, 1988; Heppner & Petersen, 1982; Nezu, 1986a).

2. Impulsivity (e.g., Davis, 1983; Plutchik, van Praag, Picard, Conte, & Korn, 1989; Williams, Davidson & Montgomery, 1980; Williams, Sale, & Wignall, 1977).
3. Motivation (e.g., Curran, 1983; Diekstra, 1989b; Hawton, 1986; Hawton, Cole, O'Grady, & Osborn, 1982).
4. Social learning history (e.g., Bostock & Williams, 1974, 1975; de Catanzaro, 1981; Diekstra, 1985; Frederick & Resnik, 1971; Lester, 1987).
5. Alternative and means-ends thinking (e.g., Cohen-Sandler, 1982; Goodstein, 1982; Levenson, cited in Arffa, 1983; Patsiokas, Clum, & Luscomb, 1979).
6. Locus of control (e.g., Goldney, 1982; Goldney, Winefield, Tiggemann, Winefield, & Smith, 1989; Sakinofsky, 1988; Topal & Reznikoff, 1982).
7. Perceived outcome of suicidal behaviors (e.g., Hawton & Catalan, 1982; Sale, Williams, Clark, & Mills, 1975).
8. Self-efficacy (e.g., Bandura, 1977a).
9. Attitudes (e.g., Curran, 1983; Domino, Gibson, Poling, & Westlake, 1980; Stillion, McDowell, & Shamblin, 1984).

Based on an integration of the above variables, an initial social information-processing model was developed. In order to test the appropriateness of the model, and to gain additional information that could be used to modify the model, two samples of adolescent females completed instruments and were interviewed. The first sample consisted of ten individuals who were assessed at the Emergency Department of a Calgary, Alberta hospital following an intentional, low lethality drug overdose. The second sample was a comparison group of ten individuals who were assessed at the Emergency Department of the same hospital following a minor illness for which they were not hospitalized. This group had no previous suicidal history.

The approach taken in most studies has been to measure a "suicidal" group and one or more control groups on a number of cognitive skills, and then to examine the mean differences between the groups using univariate analyses. One limitation of this approach is that even though overall means on these measures may be lower for the suicidal group, often there are individuals within the suicidal group who do not score below the control group(s) on one or more of the measures. How does one explain their results? It was hypothesized that through examining patterns of responses for each individual across measures, within the framework of a model, one could obtain meaningful data that would otherwise be obscured by focusing only on univariate mean differences. Therefore, a multiple case study approach (Yin, 1984) was used to analyze the data. Modifications of the initial social information-processing model were made based on the information obtained from the analyses.

C. Terminology

Before proceeding further, it is necessary to address the controversy regarding appropriate terminology. The term "attempted suicide" has been criticized because it is often used to describe behavior which lacks any serious suicidal intention (Hawton & Catalan, 1982). Therefore, a person who jumps off a ten storey building and "accidently lives", and a person who makes a superficial cut to her[1] wrist are both referred to as "attempted suicides", where clearly in the latter case there is no intention of suicide. Shneidman (1985) contended that we should reserve this term for only those events where there has been a failure of a conscious effort to end one's life. Alternative terms have been introduced to deal with the problem of intention, including "parasuicide" (Kreitman, Philip, Greer, & Bagley, 1969) and "non-fatal deliberate self-harm" (Morgan, 1979).

---

[1] In the interest of simplicity, when referring to a person, feminine personal pronouns will be used.

Parasuicide refers to a behavioral analogue of suicide, but a psychological orientation toward death is not considered essential to the definition. Based on a set of definitions drawn up for the World Health Organization, Van Egmond and Diekstra (1989) defined parasuicide as:

"(a) A non-habitual act with non-fatal outcome;

(b) that is deliberately initiated and performed by the individual involved in expectation of such an outcome;

(c) that causes self-harm or without intervention from others will do so or consists of ingesting a substance in excess of its generally recognized therapeutic dosage;

(d) the outcome being considered by the actor as instrumental in bringing about desired changes in consciousness and/or social condition" (p. 54).

Morgan (1979) suggested "non-fatal deliberate self-harm" as another way of describing a form of behavior which, as well as encompassing failed suicides, also includes episodes in which actual self-destruction is clearly not intended.

Hawton and Catalan (1982) use "deliberate self-poisoning" and "overdose" to describe "the deliberate ingestion of more than the prescribed amount of medical substances, or ingestion of substances never intended for human consumption, irrespective of whether harm was intended" (p. 4).

For the purposes of this dissertation, when referring to a specific source from the literature, an effort will be made to use the term that is consistent with the term that was used by the author. Otherwise, when the behavior in general is being discussed the terms "parasuicide" or "suicidal behavior" will be used.

D. Overview of the Study

In chapter I, the topic area was introduced and the purpose of this research was presented. An overview of the problem-solving literature is presented in chapter II.

In chapter III the design of the study is outlined, including details of sample selection, a description of data collection, and techniques of analyses. Chapter IV contains a description of the samples in terms of demographic and social variables. Case summaries of the individuals are also provided. The proposed social information-processing model is outlined in chapter V, and is discussed in the context of the relevant research literature and the data from the present study. In chapter VI, mediating variables that could influence the problem-solving process are discussed, and in chapter VII the components of the model are further clarified through individual case illustrations. The theoretical and practical implications of the model are offered in chapter VIII.

II. SOCIAL PROBLEM SOLVING

Research into human problem-solving processes prior to the early 1970s focused almost exclusively on impersonal problems (e.g., Simon & Newell, 1971). Over the past two decades there has emerged a new direction of research in the area of problem solving which represents a branching from the impersonal realm into the interpersonal or social realm. The impetus of this research can in large part be attributed to the efforts of George Spivack, Myrna Shure and Jerome Platt from the Hahnemann Community Health Center in Philadelphia (e.g., Platt & Spivack, 1972a, 1972b, 1974; Shure & Spivack, 1978; Spivack & Shure, 1974).

The present chapter outlines the approach of Spivack and his colleagues to social problem solving, reviews the literature relating social problem solving to suicidal behaviors, presents social problem solving from the perspective of three social information-processing models, and concludes with a conflict model of decision making.

A. Interpersonal Cognitive Problem-Solving Skills (ICPS)

Spivack, Shure and Platt were among the first researchers to distinguish between the processes involved in impersonal and interpersonal problem solving. They argued that the ability to solve impersonal, or abstract tasks, is not related to competence in dealing with real-life interpersonal conflicts, except in as far as they establish some minimal requirement of general intellectual aptitude. Spivack and his colleagues proposed that an individual's capacity for problem solving can be defined as a set of interrelated skills which they refer to as Interpersonal Cognitive Problem-solving (ICPS) skills. These skills include:

1. Problem sensitivity - an awareness of the problems that may be encountered in human interactions along with the ability or willingness to examine, in any given interpersonal interaction, what may have gone wrong.

2. Alternative-solution thinking - the ability to generate multiple problem solutions to a given interpersonal problem situation by withholding censorship and suspending judgment of ideas.

3. Means-ends thinking - the ability to elaborate or plan a series of step-by-step means to attain a given goal. This process includes being able to recognize potential obstacles, alternatives, and social consequences. As well, it involves an appreciation that problem solving can be a complicated and time-consuming process.

4. Consequential thinking - the ability to foresee the immediate and more long-term consequences of a particular alternative in terms of oneself, as well as others, and to use this information in the decision-making process.

5. Causal thinking - the realization that how one feels and acts may have been influenced by, and may have an influence on, how others feel and act (Butler & Meichenbaum, 1981; Urbain & Kendall, 1980).

Spivack and Shure assumed that social problem-solving skills are necessary for the development of normal mental health. Their emphasis, therefore, was on identifying children with deficits in social problem solving, and on the development of programs to alleviate these deficits. In order to measure the ICPS skills, Spivack and Shure developed a set of measures (Platt & Spivack, 1977). Urbain and Kendall (1980) reported that the ICPS skills that have been found to bear the most consistent relationships to measures of overt social adjustment are alternative thinking, consequential thinking, and means-ends thinking.

Rubin and Krasnor (1986) labelled the ICPS measures "hypothetical-reflective" because they stated that these tests are an attempt to measure a person's ability to "reflect" on a response to hypothetical problem situations. They questioned the ecological validity of hypothetical-reflective reasoning tests because they reported that recent research efforts to link the skills measured by ICPS tests to peer or teacher ratings have culminated in mixed results. As well, they stated that data obtained from research in the late 1970s and early 1980s revealed that "hypothetical-reflective measures of social problem-solving skills did not correlate significantly with behavioral ratings of social competence and that changes in social problem-solving reasoning were not directly associated with changes in behavior" (p. 11). Mann and Janis (1982) stated that a number of investigators have demonstrated that when people have a consequential choice to make, they often react in an entirely different manner than when they confront the same problem presented as a purely hypothetical issue or intellectual exercise.

The criticisms of the approach of Spivack and his colleagues have been directed more at the measurement of the skills rather than at the validity of the theory. Nonetheless, these measures are still being utilized in recent research studies and have found popularity amongst suicide researchers.

B. The Relationship Between Problem-Solving Abilities and Suicidal Behaviors

Most of the research examining the relationship between suicidal behaviors and social problem-solving abilities has focused on one or more ICPS type skills (e.g., Asarnow et al, 1987; Cohen-Sandler, 1982; Goodstein, 1982; Linehan et al., 1987; McLeavey et al., 1987; Patsiokas et al., 1979; Schotte & Clum, 1987).

Cohen-Sandler (1982) compared suicidal and non-suicidal hospitalized psychiatric patients, and hospitalized non-psychiatric patients (N=30) aged 8 to 13 on a number of measures including the Alternative Uses Test and the Means-Ends Problem Solving Procedure. She found that the suicidal children were more deficient in flexibly generating alternative solutions to common interpersonal problems. Cohen-Sandler concluded that suicidal children have specific deficits in both the efficiency and the quality of their cognitive problem-solving skills. She also stated that suicidal children rigidly conceptualize a limited number of viable alternative solutions and that they focus impulsively on social goals rather than on the means to achieve them.

Asarnow et al. (1987), using a similar sample of 30 psychiatric inpatients, found that the quantity of adaptive coping strategies generated did not differentiate nonsuicidal patients, suicidal ideators and suicide attempters aged 8-13. However, when the content of the solutions was examined, they found that suicidal ideators were less likely than nonsuicidal children to generate active cognitive coping strategies. They did not find any differences between children who had attempted suicide and those who had not attempted suicide.

McLeavey et al. (1987) compared self-poisoning patients with psychiatric inpatients and non-patient controls on the Means-Ends Problem Solving (MEPS) Procedure, the Optional Thinking test (OT) and the Awareness of Consequences test. They found that the self-poisoners and the psychiatric patients performed significantly lower than the inpatient control group on the MEPS and the OT. The self-poisoning group also performed significantly lower than the psychiatric group on both these measures. However, on the Awareness of Consequences test they found the self-poisoning group and the psychiatric group to differ from the control group, but not from each other.

Goodstein (1982) compared hospitalized suicide attempters, depressed psychiatric inpatients, nondepressed psychosomatic patients, and normal hospitalized patients on a number of measures including problem-solving abilities. She found that the suicide attempters were poorer problem solvers when compared to the patients in the other groups. Specifically, suicide attempters provided significantly fewer relevant means and significantly more irrelevant means on the Means-Ends Problem Solving Procedure. Goodstein concluded that suicide attempters' ability to cope with new life stressors is lessened due to their diminished ability to find viable solutions to their problems.

Other researchers have also reported a relationship between problem-solving deficits and suicidal behaviors. Patsiokas et al. (1979) found a group of suicide attempters to be more cognitively rigid than a psychiatric control group in terms of their ability to generate alternate uses of well-known objects. Linehan et al. (1987) found that parasuicides scored lower on active problem solving as compared to suicide ideators and nonsuicidal patients.

Problem-solving ability has also been examined in the context of its relationship to suicidal ideation. Schotte and Clum (1982) researched the relationship between problem-solving performance and suicidal ideation in a sample of college students. They found no overall relationship between these variables. However, when they included the number of reported negative life events in the analysis they found that poor problem solvers, experiencing high stress, had higher levels of suicidal intent when compared to good and poor problem solvers who reported low stress. They suggested that problem solving is mediational in nature and that in conjunction with negative life stress, poor problem solving may lead to feelings of hopelessness which results in the development of suicidal ideation. In a subsequent study, in which inpatients on suicidal precautions were compared with a nonsuicidal control group, Schotte and Clum (1987) found that the suicidal group generated fewer alternative solutions to problems and were more likely to list a greater number of negative consequences for each solution generated.

One explanation for the reduced problem-solving ability found in individuals who exhibit suicidal behaviors is that these individuals have a rigid, cognitive style. Parker (1981) stated that research indicates that suicidal individuals tend to have dichotomous, inflexible thinking, a narrow range of constructs, and a field dependent perceptual style which culminates in their diminished problem-solving and conflict resolving ability (cf. Neuringer, 1961, 1964). Williams and Lyons (1976) stated that adolescents at suicidal risk are reported to display a marked rigidity in their life styles and cognitive processes, and thus are less able to consider alternative solutions than other young people their age. A recent study by Perrah and Wichman (1987), though, concluded that cognitive rigidity is not a personality trait of suicide attempters, but seems to be a transient characteristic that is limited to a crisis period.

One other explanation for the reduced problem-solving ability found in suicidal samples is that these individuals have an inadequacy of training in long-term problem-solving techniques (Williams & Lyons, 1976), and that they model their parents' ineffective problem-solving approaches. Cohen-Sandler, Berman, and King (1982) compared 76 suicidal, depressed, or psychiatric controls aged 5 to 14. They viewed the suicide attempts of the children in their study to be active coping effects used to counteract the helplessness felt in not being able to make changes in the stressful, chaotic conditions of their families. These authors stated that the dynamics of the families investigated seem to foster the use of attempted suicide as a coping strategy. They found that the parents of the suicidal children had more impulsive coping styles, they abused alcohol and/or drugs more often, and they engaged in earlier and more frequent marital unions and separations. The data obtained from this study lead the authors to suggest a modeling process whereby parents "did present to the potentially suicidal child an example of interpersonal conflict, avoidance, impulsivity, and lack of more adaptive coping skills" (p. 184).

McKenry, Tishler, and Kelly (1983) arrived at a similar conclusion based on a comparison of parents of attempter and nonattempter adolescents. They found that the parents of the suicidal adolescents were themselves less able to cope with various life events as compared to the parents of nonattempters, and they suggested that perhaps this maladaptive behavior was modeled to their children.

The above research indicates that an important component in the explanation of some suicidal behaviors may be problem-solving ability. If some individuals come from backgrounds in which effective problem-solving skills are not taught, and where parents and/or peers model ineffective coping patterns (such as alcohol and drug abuse) as means of dealing with various life events, it may be that in stressful situations they are ill-prepared and thus unable to consider more acceptable means of achieving their goals. Berman and Carroll (1984) stated that without alternative and effective coping models, a suicide attempt may be a last-ditch effort to alter an intolerable situation.

C. Social Information-Processing Models

Concentrating on the measurement of individual problem-solving skills may result in group differences between populations of interest, as demonstrated in the above mentioned research, but this approach is lacking in the power to explain individual differences in behavior. For example, a person may be classified as a "poor problem solver" but never exhibit suicidal behaviors. On the other hand, a person might be a "very effective problem solver" but may still resort to choosing a suicidal behavior in a crisis situation. As well, this approach does not offer an explanation for the failure of hypothetical-reflective skills to "materialize" in actual performance. McClure, Chinsky and Larcen (1978) observed in their research with children that increasing the variety of strategies available to a child did not necessarily imply that the strategies would actually be used in a given situation.

One approach to dealing with these failings may be found through examining the definition of problem solving. D'Zurilla and Goldfried (1971) defined problem solving as "the *process* or technique by which one attempts to 'discover' a solution to a problem" (p. 109) [italics added]. The emphasis on individual skills in the research reviewed in the previous section could be viewed as an insular approach which ignores the process aspect specified in this definition. A model of problem solving, such as the form developed within the social information-processing framework, is deemed to be a more appropriate tool for examining suicidal behaviors because it allows one to examine the choice of behavior from a process-oriented perspective.

In the paragraphs that follow, three models of social information processing will be outlined. The first model was conceptualized by D'Zurilla and Goldfried (1971) and expanded by Allen, Chinsky, Larcen, Lochman, and Selinger (1976). Dodge's (1986) social information-processing model of competence, and Rubin and Krasnor's (1986) model of social problem solving will also be presented.

Allen et al.'s Adaptation of D'Zurilla and Goldfried's Model of Problem Solving

D'Zurilla and Goldfried (1971) offered one of the initial conceptual models of social problem solving. This model is more of a prescriptive, as opposed to a descriptive model, but is reviewed because it has gained popularity amongst researchers examining suicidal patients (e.g., Patsiokas & Clum, 1985) and depressed patients (e.g., Nezu, 1986a; 1986b).

D'Zurilla and Goldfried (1971) outlined the problem-solving process through integrating a variety of impersonal problem-solving theories within a sequential framework. This model divides the problem-solving process into the following stages: general orientation, problem definition and formulation, generation of alternatives, decision making, and verification.

The first stage, *general orientation*, is the set in which a person approaches a situation and it greatly influences the direction of the response to the situation. The set which is likely to encourage independent problem-solving behavior includes the expectancy that the problem situation is a normal part of life and can be dealt with effectively, the recognition of problematic situations, and the inhibition of the tendency to respond impulsively or to do nothing.

In the second stage, *problem definition and formulation*, the problem is identified and further defined. This involves gathering information, operationalizing vague elements, separating relevant from irrelevant information, identifying primary goals, and specifying major subproblems.

The third stage, the *generation of alternatives*, is "perhaps the most crucial component behavior in finding the most effective solution or response" (Allen et al., 1976, p. 51). Involved in this phase is the generation of effective responses, rather than placing the emphasis on the production of only good quality alternatives. This technique relies on the principle that "quantity breeds quality". D'Zurilla and Goldfried (1971) asserted that the more response alternatives generated, the more likely one is to arise at the potentially best ideas for a solution.

Once a number of alternatives have been generated, an attempt must be made to weigh the various alternatives against each other. The value of each outcome, as well as the likelihood that the alternative will result in achieving this outcome, must be evaluated. This is called the *decision-making stage*. The decision-making process not only involves choosing the best strategy, but also requires consideration of the specific ways in which these alternatives might be implemented. D'Zurilla and Goldfried (1971) outlined one approach where once the best strategy is selected, the "generation of alternatives" phase is returned to in order to produce alternative specific behaviors for carrying out the selected strategy.

The final stage, *verification*, takes place after one has chosen and implemented a course of action. This phase involves assessing the actual outcome of the action so that self-correction and modifications can be made. D'Zurilla and Goldfried (1971) stated that without this step a person may persist in carrying out a behavior that is ineffective, instead of taking measures to locate and correct the problem.

Even though this approach outlines a sequential process, the authors contend that more typically the stages usually overlap and interact with each other. Recent research findings have offered support for this model (Cormier, Otani, and Cormier, 1986; D'Zurilla & Nezu, 1980; Nezu & D'Zurilla, 1979, 1981a, 1981b).

Allen et al. (1976) have adapted and expanded upon the D'Zurilla and Goldfried (1971) model (Figure 1). This model starts with an expectancy that problem resolution is a function of one's problem-solving behavior, and that looking for divergent or alternative strategies will lead to successful problem resolution. Once the problem had been identified, alternative solutions are generated. The potential consequences of each solution are evaluated and specific steps to carry out the alternatives are considered. This will continue until a satisfactory solution has been selected. After the implementation of the solution, actual outcomes and feedback are incorporated for future effective problem solving.

Dodge's Social Information-Processing Model of Competence

Dodge (1986) proposed a "social information-processing model of competence" to describe how individuals process social information in order to respond in social settings (Figure 2). In this model an individual comes to a particular situation with a set of biologically determined response capabilities, and with a data base of learned responses. When the person receives a set of social cues from the environment, the first step is to encode the social cues. Due to the voluminous amount of information present in the social environment at a single moment, the individual must attend to the appropriate cues, chunk information and use rehearsal and mnemonic devices in order to store the information. These tasks must be performed in a manner "that is free from debilitating biases" (p. 83). Dodge hypothesized that inefficiency or inaccuracy at his stage would increase the probability that the individual would behave in what might be considered a deviant, incompetent, or inappropriate manner. Included in the encoding process is information-seeking whereby the person attends to relevant cues and generates needed information (Slaby & Guerra, 1988).

Figure 1 has been removed due to the unavailability of copyright permission.

Figure 1. Allen et al.'s adaptation of D'Zurilla and Goldfried's problem solving stages (From Allen et al., 1976, p. 52).

Figure 2 has been removed due to the unavailability of copyright permission.

Figure 2. Dodge's social information processing model of competence (From Dodge, 1981, p. 84).

After the encoding has taken place, the cues must be integrated with memories of past experiences in order to come to a meaningful understanding of these cues. This stage is often indistinguishable from the first stage and may involve a feedback loop to the encoding step. Skill deficits (i.e., failure to accurately interpret the presented cues) and cognitive biases in processing (i.e., attending only to negative cues) at these first two steps may lead to deviant behavioral responses.

Once the encoded information has been represented in a meaningful way, a generative process of searching for possible responses occurs. Structures (i.e., if I have been hit, then I can hit back) are applied in order to access reasonable responses to specific stimulus sets.

The next step involves the evaluation of potential consequences of each generated response, and the estimation of the probabilities of favorable outcomes. The individual must take into account the environmental context and her own behavior capabilities. For example, a response may not be effective in a specific situation, whereas another response may not be effective because the individual does not have the skills to carry it out.

When an optional response has been selected, it is acted upon. If the behavior does not lead to the desired outcome, the five-step process is repeated.

Dodge assumes that the processing of information can occur at a nonconscious level and this explains the occurrence of biases in processing and responding. He stated that conscious processing is most likely to occur in highly problematic situations when a novel response is required, or when a cue brings the processing to the level of awareness. Dodge also assumes that the essential features of structures are the same at conscious and unconscious levels.

Rubin and Krasnor's Model of Social Problem Solving

Rubin and Krasnor (1986) also described a social information-processing model (Figure 3). The first step in their model involves selecting a social goal, which by definition is a representation of the end state of the problem-solving process. A goal may be changed during the process or broken into subgoals, but the goal "in force" at a particular time provides the basis for evaluating the outcome.

Once a goal has been selected, the individual surveys the task environment before deciding upon the strategy to achieve the specific goal. These strategies are stored in long-term memory. The individual accesses the strategies by retrieving one or more of them into a "working space", or short-term memory, for consideration or implementation. Strategies can be accessed in an automatic or deliberate fashion, though the strategy must already exist in a person's repertoire of responses. The individual may construct new strategies through the cognitive transformation of available strategies.

The selection process involves the evaluation of the strategies produced. If a script (e.g., Schank & Abelson, 1977) is available to guide behavior, the selecting is relatively automatic. Another selection procedure involves comparing each strategy as it becomes accessible to a preset criteria of acceptability, performability and potential effectiveness. The first strategy to match the preset criteria is implemented. When more than a single strategy is accessed, a comparison is made and the "best" of the accessible strategies is selected.

Once a strategy has been selected and implemented, the outcome must be assessed. If the strategy is judged to be a success, the problem-solving process ends. If the strategy is a failure, the individual may:

1. Repeat the same strategy.
2. Stop making attempts to fulfill the goal. A new or modified goal may by chosen and the process reinstated.

Figure 3 has been removed due to the unavailability of copyright permission.

Figure 3. Rubin and Krasnor's model of social problem solving (From Rubin & Krasnor, 1981, p. 17).

3. Modify the strategy while maintaining the same goal.

If the strategy is judged to be a partial success, the individual can proceed as if it was a success, or alternatively, as if the outcome was a failure.

A comparison of the above three models revealed that they contain very similar processes, though they may contain a differential focus on specific aspects of these processes. For example, within the problem definition stage, Dodge focused more on the cognitive operations such as encoding, while the other two models tended to focus more on the cognitive products such as problem definition and goal specification.

Table 1 outlines these common components. As can be seen, the first stage involves the factors that the individual brings to the situation. These include such factors as biological capabilities, psychological traits (i.e., impulsivity) and social learning experiences. The next process involves the recognition that a problem exists. Once the problem has been identified, a response to the problem is sought. The responses are evaluated and a decision is made to implement one of the responses. Once the response has been implemented, the outcome is evaluated.

Horan (1979) synthesized 22 stage theories of problem solving and decision making that have been developed since the turn of the century, and came to a similar conclusion regarding the common components of the theories. He stated that most of these models can be summarized into four sequential stages. He described these stages as conceptualization, enlargement of the response repertoire, the identification of stimuli discriminative of positive or aversive consequences for each response, and response selections.

One other model that comes under the rubric of behavioral decision theory that has received much attention and, therefore, will be briefly discussed, is the subjective expected utility (SEU) model (e.g., Edwards, 1954, 1961). This model

Table 1

A Comparison of Three Social Information-Processing Models

STAGES	MODEL Allen et. al.	 Rubin & Krasnor	 Dodge
Set	Competency Set Divergency Set		Biologically Determined Capabilities/ Data Base
Problem Definition	Problem Identification	Selects a Goal	Encoding Process/ Representation Process
Response Search	Generation of Alternatives	Accesses Information	Response Search Process
Response Selection	Consideration of Consequences/ Elaboration of Solutions	Strategy Selection	Response Decision Process
Response Implementation	Implementation of Solutions	Strategy Implementation	Enactment Process
Response Outcome	Feedback	Outcome	Enactment Process

outlines a simple and comprehensive rule for making decisions. It involves (a) listing all feasible courses of action; (b) enumerating all possible consequences for each action; (c) assessing the attractiveness or aversiveness of each consequence and assessing the probability that it will be incurred should the action be taken; (d) computing the expected worth of each consequence by multiplying its worth by its probability of occurrence; (e) computing the expected worth of each action by summing the expected worth of all of its possible consequences; and (f) choosing the action with the greatest expected worth (Fischhoff, Goitein, & Shapiro; 1982). This model has been criticized because it seems to assume that the only important information-processing involved in decision making is the comparison of the expected values of alternative courses of action (Mann & Janis, 1982). As well, it has been criticized for not providing an accurate description of real life decision making. "The story of behavior decision theory has been the growing realization that SEU often does not describe the decision-making process either as it is designed or executed" (Fischhoff et al., 1982, p. 317). Mann and Janis (1982) recommended that the SEU theory be considered for a prescriptive or normative role, rather than a comprehensive descriptive model of decision making.

As with the SEU model, most models can be classified as prescriptive or normative models. That is, they offer a guide to effective problem solving, but they do not describe how problem solving often takes place. Most models seem to presuppose a cool, rational decision maker who diligently carries out the prescribed steps before coming to the best decision. However, in conflicted social situations problem solving is often carried out under "hot" conditions that are not conducive to cool, rational thinking. Unfortunately, how we ought to behave often differs from how we actually behave.

Janis and Mann proposed a conflict model of decision making to describe how the psychological stress of decisional conflicts affect the way people make their choices

(Mann & Janis, 1982). This theory is concerned with how individuals arrive at their choices, not with predicting which alternative will be selected. They stated that conflict arises when all available alternatives are viewed as uncertain for achieving a goal, or as leading to potential failures for attaining a specific goal. They postulated that there are five basic patterns of coping with this conflict. These are:

"1. *Unconflicted adherence.* The decision maker complacently decides to continue whatever she has been doing, which may involve discounting information about risk of losses.

2. *Unconflicted change* to a new course of action. The decision maker uncritically adopts whichever new course of action is most salient or most strongly recommended.

3. *Defensive avoidance.* The decision maker escapes the conflict by procrastinating, shifting responsibility to someone else, or constructing wishful rationalizations to bolster the least objectionable alternative, remaining selectively inattentive to corrective information.

4. *Hypervigilance.* The decision maker searches frantically for a way out of the dilemma and impulsively seizes upon a hastily contrived solution that seems to promise immediate relief. The full range of consequences of the choice are overlooked as a result of emotional excitement, perseveration, and cognitive constriction (manifested by reduction in immediate memory span and simplistic thinking). In its most extreme form, hypervigilance is known as 'panic'.

5. *Vigilance.* The decision maker searches painstakingly for relevant information, assimilates information in an unbiased manner, and appraises alternatives carefully before making a choice" (pp. 344-345).

The first four patterns are regarded as defective patterns of decision making, while the 5th pattern, *vigilance* ,will lead to high quality decision making.

This conflict theory specifies that there are different types of information-processing associated with each of the coping patterns. While the person displaying a vigilant coping pattern will prudently go through the stages outlined in the problem-solving models, individuals using the other coping patterns will often not engage in high-quality decision making. For example, they are not likely to thoroughly canvass their alternatives or adequately evaluate the consequences of these alternatives. Janis and Mann's model has implications for the analysis of suicidal behaviors because often a suicidal behavior is engaged in under a high conflict situation, and could be the result of a choice made under the defective coping pattern of *hypervigilance*.

D. Conclusion

The goal of the present study was to use a social information-processing model to explain the choice of a suicidal behavior. However, existing models were found to be inadequate because they either tended to be prescriptive models, or they did not describe the decision-making process in detail. In fact, relatively little attention has been directed toward the variables involved in the decision-making process within the social information-processing framework (Slaby & Guerra, 1988). In addition, upon reviewing the social psychological literature, it became apparent that there were a number of variables, which will be discussed in a subsequent chapter, that could have mediating effects upon the decision to engage in a suicidal behavior. Therefore, a decision was made to construct a model that incorporated the common elements of the present models, and expanded upon the decision-making stage. It would then be possible to discuss the mediating variables within the context of the model, and thus supplement the explanatory powers of the model.

III. METHOD

The chapter will begin with a discussion of the methodological considerations that have arisen from previous research studies. Following this discussion will be the data collection procedures and a description of the instruments. The chapter will conclude with an outline of the data analysis and the limitations of the study.

A. Methodological Considerations

A major research effort has been directed toward investigating the characteristics of individuals who engage in suicidal behaviors. Research endeavors designed to demonstrate the existence of a unitary suicidal personality type have not provided encouraging results, thus leading investigators to conclude that the act of committing a suicidal behavior may be the endpoint of several different pathways for a variety of personality types (D. R. Anderson, 1981). In fact, several investigators have been able to cluster suicide attempters into typologies (e.g., Choquet, Facy, & Davidson, 1980; Goldney, 1981; Hawton, Osborn, O'Grady, & Cole, 1982; Henderson et al., 1977; Kiev, 1976; Kurz, Moller, Baindle, Burk, Torhorst, Wachtler, & Lauter, 1987; Tishler & McKenry, 1982). Therefore, it is possible that conflicting results and opposing theories have occurred in the research literature because, in part, of the heterogeneity of the people studied.

A number of variables have been identified that differentiate people who have engaged in suicidal behavior. These variables include the lethality of the behavior, whether the individual has made a first attempt or is a multiple attempter, the method chosen in the attempt, and the sex and age of the individual.

Berman and Carroll (1984), upon reviewing the literature, stated that generally research has focused on suicidal behaviors without regard to lethality or intentionality so that individuals who have committed an act of parasuicide without serious intent have been combined with serious suicide attempters and treated equivalently (e.g., Kotila, 1989; Stiffman, 1989). However, research indicates that there are differences among individuals who exhibit suicidal behaviors of varying lethality that cut across many dimensions. For example, Garfinkel, Froese, and Hood (1982) found that children and adolescents who had made serious suicide attempts were different from those who had made less serious suicide attempts in terms of educational variables, psychiatric symptoms, and family history. Neuringer (1979) compared high, moderate and low lethality groups on their perceptions toward life and death. He found that only the seriously suicidal person perceived life in a negative manner and death as attractive, with the reverse being true for the less seriously self-destructive groups. He concluded that the lower lethality persons are still seeking ways of making life supportable and are not yet committed to death. Smith and Maris (1986), therefore, suggested that persons who make low lethality suicide attempts should be studied separately from those individuals who make severely life-threatening attempts

Whether one has engaged in more than one suicidal behavior has also been found to be important. Gispert, Davis, Marsh, and Wheeler (1987) found adolescents who reported multiple attempts to be less successful in school, to display more hostility, to report dysphoria, and to have undergone more long-term stress as compared to adolescents who had attempted suicide once. Diekstra (1989b) reported that persons who make recurrent attempts, as compared to first attempters, are more often diagnosed as sociopathic personalities, and they more often have an unstable way of life as evidenced by frequent changes in residence, very poor work records, addictive behavior, and a criminal record. As well, they are more likely to come from "broken homes". Farmer (1980) compared individuals who had self-poisoned to a "normal" control group and found that people who had only made one attempt did not differ significantly from the control group, while the repeaters did.

Differences between individuals have also been identified when the method used in committing the suicidal behavior is examined. For example, Fox and Weissman (1975) found that attempts made by pill ingestion were the most impulsive, had the least intent to kill, and were motivated towards obtaining attention from significant others. Attempts by violent methods were more planned, had a higher intent to kill, and these individuals expressed more self-directed hostility.

Researchers have found differences in suicide attempters across age groups (e.g., Patsiokas et al., 1979; Stone, 1975; Triolo, McKenry, Tishler, & Blyth, 1984). For example, Lester (1988) stated that the typical suicidal adolescent appears to be responding impulsively to an immediate interpersonal stress, whereas the older suicidal individual appears to be responding to a life-long pattern of suffering or disturbed behavior.

Sex differences are also often ignored, though suicidal behaviors seem to involve different etiologies for males and females (Kotila & Lonnqvist, 1988; Marks & Haller, 1977; Triolo et al., 1984). Kotila and Lonnqvist (1988) found that adolescent males' suicide attempts seemed to be connected with more severe physical, mental and social problems as compared to adolescent females' suicide attempts. They also found that the outcome for the males to be much worse, with the risk ratio for suicide during a five-year follow-up to be almost four times higher for males than for females.

The above discussion is meant to alert people to be cautious in their interpretations of conclusions drawn from studies that have not controlled for the above mentioned variables. As well, this section provides the rationale for the restrictive criteria for sample selection to be presented in the next section.

B. The Samples

Two samples of ten individuals each were obtained from the Emergency Department of a Calgary, Alberta hospital during the time period of September 1, 1987 thru August 31, 1988. The hospital catchment area includes the total urban population of the city.

The samples consisted of individuals who had engaged in a suicidal behavior and a comparison group. Based upon the considerations aforementioned, an attempt was made to restrict the samples so that they would be as homogeneous as possible. Therefore, only Caucasian females between the ages of 14 and 20 were included in the study. The form of the suicidal behavior was limited to an intentional, low lethality drug overdose, and was a "first-ever" suicide attempt. A drug overdose was chosen as the method under study as self-poisoning is the most common form of parasuicide (Hawton, 1982; McLeavey et al., 1987). In fact, Gazzard, Davis, Spooner, and Williams (1976) stated that intentionally "taking an overdose of a drug is now so common that it warrants the description of the modern epidemic" (p. 212). The individuals in the comparison group had never before "harmed themselves".

A low lethality drug overdose was defined as one that was scored as 3.5 or lower on the Lethality of Suicide Attempt Rating Scale (LSARS; Smith, Conroy, & Ehler, 1984). This score was used as Smith et al. (1984) recommended that a score over 3.5 be labelled as "serious" suicidal behavior. A clinical psychiatrist from the Emergency Department of the participating hospital rated the individuals according to the criteria outlined in the LSARS. Table 2 presents the lethality rating for each of the 10 individuals.

None of the individuals required hospitalization due to medical reasons, though one individual was hospitalized for approximately 10 days due to complications in her living situation.

C. Data Collection Procedures

The research was approved by the Department of Educational Psychology Ethics Review Committee at the University of Alberta, by the Research and

Table 2

Lethality Ratings of the Parasuicide Sample

Rating	Frequency
0	2
1	1
2	6
3.5	1

Development Committee at the participating hospital, and by the Biomedical Ethics Committee at the University of Calgary. An inservice was held with the participating staff members to brief them as to the criteria of those individuals who would be considered suitable for the project.

Upon admission to an emergency area for an episode of suicidal behavior, patients are usually assessed by the Department of Psychiatry. For the present study, after being assessed in Psychiatric Emergency, suitable candidates were informed that a research project was being carried out at the hospital and the individual was provided with an information sheet which briefly described the project (See Appendix A). If an individual was interested in the project, she was informed that she would be contacted and the project would be discussed in more detail. She was then contacted by the present author or a hospital psychiatrist, the details of the project were outlined, and if she consented to participate in the study an appointment time was arranged. As well, daily computer listings of all individuals who had been registered in the Emergency Department were obtained and reviewed for individuals who had inadvertently not been assessed by the Department of Psychiatry, but had been discharged at the discretion of the attending physician. Phone contact was made with these individuals and if they met the study criteria they were asked to participate in the study. It was not possible to document the number of individuals who refused to participate in the study, but it is estimated that the number was fewer than five.

The individuals in the comparison group were obtained by targeting females between the ages of 14 to 20 years who had been treated in the Emergency Department for a minor illness which did not require hospitalization. Originally, consistent with the approach used to select the parasuicide sample, these individuals were to be approached in the Emergency Department by the attending physician and asked to participate in the project. However, it was not possible to obtain the help of the Emergency Department physicians. Therefore, the above mentioned computer listing of all individuals who had been assessed in the Emergency Department was used to target individuals who matched the parasuicide sample in terms of gender and age. Suitable candidates were contacted by the present author or a hospital psychiatrist and the nature of the project was explained to them. Appointment times were arranged with those individuals who were willing to participate and who indicated that they had never before "harmed themselves".

Consent to participate in the study was obtained from all participating individuals (See Appendix B). Consent from a parent or guardian was also obtained for those individuals under the age of sixteen. The individuals were offered $20.00 for participating in the study.

The data were collected by the present author during one session with each individual. Within 48 hours following the session the present author wrote down her clinical impressions of the interview. The average length of the session was approximately 186 minutes for the parasuicide group and 92 minutes for the comparison group. The average length of time between the suicidal behavior and the interview was approximately 16 days, and ranged from 8 days to 28 days.

At first it was puzzling that with the reported high incidence of suicidal behaviors among adolescents, it took one year to obtain a sample size of ten individuals in the parasuicide group. However, upon further consideration it was apparent that two major factors contributed to the delay in obtaining an adequate sample size. First, studies have indicated that the majority of individuals who attempt suicide never receive medical treatment (e.g., Rubenstein, Heeren, Housman, Rubin, & Stechler, 1989; Smith & Crawford, 1986). In fact, Smith and Crawford (1986) suggested that almost 90% of adolescent suicide attempters will not receive medical treatment. Second, of the adolescents who would have sought medical treatment, the number eligible for participation in the present study was further reduced by the restrictive criteria outlined previously. This dramatically reduced the size of the population from which to sample.

D. The Instruments

As stated in chapter I, a number of variables were identified that are proposed to be involved in the social problem-solving process[1]. In order to measure these variables questionnaires were selected, modified, and/or developed. An interview schedule was also developed to obtain additional information, and to validate the information obtained from the questionnaires (Appendix C). All the data were collected using a self-report method. This is not believed to be a strong limitation as, according to Mischel (1981), "the studies on the comparative utility of direct and indirect personality assessment seem quite consistent: the predictions possible from a person's own simple, direct self-ratings and self-reports generally have not been exceeded by those obtained from more indirect, costly and sophisticated personality tests, from combined test batteries, and from expert clinical judges" (p. 481).

Following is a description of the instruments:

The *Barratt Impulsiveness Scale* (BIS; Barratt, 1985, Appendix D) was developed as a result of extensive research over the past two decades in the area of impulsivity by Ernest Barratt. This instrument has undergone many revisions and the most recent version, the BIS-10, consists of 34 items. Each item is rated on a four point scale and weighted responses comprise the final score for each of three subtraits.

The instrument development began by reviewing past item analyses of item pools from self-report impulsiveness questionnaires. A factor analysis of impulsiveness items (Barratt, 1965) indicated that impulsiveness was not a unidimensional trait but was comprised of three consistent factors. These are (a) a motor impulsiveness subtrait which involves acting without thinking, (b) a cognitive impulsiveness subtrait which involves making quick cognitive decisions, and (c) a non-planning impulsiveness subtrait which involves a lack of "futuring".

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[1] The rationale for the inclusion of these variables in the study will be discussed in subsequent chapters.

On the basis of the reviews of psychometric and clinical studies of impulsiveness, the existing BIS was revised to measure these three impulsiveness subtraits (BIS-10, Barratt, 1985). An oblique rotation of the 34 BIS-10 items resulted in three factors which had an average correlation of .34 with each other. Barratt (1985) reported alpha coefficients ranging from .89 to .92 for the three subtraits.

The subtraits have been found to correlate with another measure of impulsiveness, but not with anxiety or venturesomeness. The BIS-10 has also been found to discriminate patients diagnosed as having an antisocial personality disorder from three other psychiatric groups (Barratt, 1985).

For the present study, items 13, 16, and 22 were excluded from the analyses as they were deemed to be not applicable to younger individuals. These items requested information regarding planning for job security, changing a job, and changing residences. The responses from the 20 individuals on the remaining items were submitted to an item analyses and on the basis of this analysis items 3, 4, 6, 25, 27, and 30 were also deleted as they did not behave consistently with the other items. The motor impulsiveness subtrait consists of items 2, 5, 8, 11, 14, 17, 20, 23, 26, 29, and 32. The cognitive impulsiveness subtrait consists of items 9, 12, 15, 18, 21, 24, and 33. The non-planning impulsiveness subtrait consists of items 1, 7, 10, 19, 28, 31, and 34. Cronbach's alphas for the motor impulsiveness subtrait, the cognitive impulsiveness subtrait, and the non-planning impulsiveness subtrait were .76, .77, and .80, respectively.

The *Lethality of Suicide Attempt Rating Scale* (LSARS; Smith et al., 1984; Appendix E) is an 11-point scale designed to measure the degree of lethality of suicide attempts. The scale was developed in response to researchers' inability to communicate about the seriousness of a suicide act in consensual terms. The authors stated that by using such unscaled adjectives as "high lethality", "low lethality", "mild", "moderate", and "serious" to describe suicide attempts, "we inflict upon ourselves a degree of imprecision similar to that of a physicist scientifically describing light intensity with the words 'dim', 'bright', and 'blinding' instead of using units of 'candlepower'" (p. 215).

The scale was developed by having 24 experienced psychiatric staff members from the disciplines of psychiatry, psychology, social work, and nursing rate and scale the items. These people were given nine cards on which a statement of lethality was written. Their task was to arrange the cards in order of the degree of lethality. They were instructed to spatially separate the cards so that the distance between adjacent cards reflected the relative degree of change in lethality. The spacing of cards was then transposed onto a 101-point scale.

In order to determine the reliability of the instrument, the participants were asked to use the scale to rate 24 suicide attempt vignettes. The inter-rater reliability coefficients ranged from .81 to .88 within disciplines, and from .96 to .98 across disciplines. The 101-point scale was then reduced to an 11-point scale by dividing by 10 and rounding the individual scale points to the nearest whole number. The authors stated that the psychometric studies show the instrument to be at least an equal-interval scale and possibly a ratio level scale. Thus, this scale allows suicidal behaviors to be referenced in terms of specific numeric relationships to each other. According to Smith et al. (1984) the scale can be reliably used by nonmedical persons with no prior training. Further studies are needed to determine the validity of the instrument.

The *Means-Ends Problem Solving* Procedure (MEPS; Platt & Spivack, 1975; Appendix F) measures the extent to which an individual is capable of conceptualizing appropriate and effective means of reaching a specified goal when presented with hypothetical problem situations. The MEPS consists of ten problematic interpersonal situations and utilizes an "open-middle" story-completion technique. For adolescents, the MEPS is usually shortened to three or four stories which deal with such problems as dating, making friends, and dealing with peers. The score most commonly reported for the test is the number of relevant means. Platt and Spivack (1975) offer a detailed scoring manual.

Platt & Spivack (1975) reported an inter-rater reliability coefficient of .98 for the total number of means. Test re-test reliability coefficients based on three separate studies are presented in the manual and are quite low. For 15 institutionalized female adolescent delinquents, a reliability coefficient of .59 was reported for a two-and-one-half week test-retest interval. For 11 college males, using a 5 week interval, and 47 institutionalized delinquent males using an 8 month interval, the test-retest coefficients were reported as .64 and .43 respectively.

In terms of internal consistency, Spearman-Brown reliability coefficients of .84 and .82 were reported for 72 male and 66 female psychiatric patients respectively. KR-20's of .82 and .80 were also reported for these two samples.

The validity of the MEPS in terms of differentiating groups according to their problem-solving abilities has been supported in studies which compared psychiatric groups and controls (Platt & Spivack, 1972a, 1974; Platt, Siegel, & Spivack, 1975; Siegel, Platt, & Peizer, 1976), psychiatric patients having high social competence from those with lower social competence (Platt & Spivack, 1972b), incarcerated heroin addicts to non-addict counterparts (Platt, Scura, & Hannon, 1973), and adolescent psychiatric patients and controls (Platt, Spivack, Altman, Altman, & Peizer, 1974).

Recent research though, has found qualitative (type of strategies) rather than quantitative scoring (number of strategies) of the MEPS to be related to overt behavior (Rubin & Krasnor, 1986). As well, Doerfler, Mullins, Griffin, Siegel, and Richards (1984), upon finding no differences between depressed and nondepressed children, adolescents, and adults on the MEPS, questioned the use of paper-and-pencil inventories. They stated, "although these measures have been used successfully with other problems . . . the external validity of such measures is questionable when they are used to investigate depression" (p. 496).

For the present study, attempts to score the MEPS quantitatively met with failure due to the vagueness of the scoring procedures in the manual. Based upon the scoring difficulties, the low test-retest reliabilities, and the lack of ecological validity of the quantitative scoring procedure, a decision was made not to use the MEPS as a measure of problem-solving ability. However, one of the stories was qualitatively analyzed in order to examine the steps involved in a fight situation with a boyfriend.

The *Nowicki-Strickland Locus of Control* scale (NSLOC; Nowicki & Strickland, 1973; Appendix G) is a measure of generalized locus of control of reinforcement that can be administered to a wide range of children. It is a paper-and-pencil test which consists of 40 yes or no items that describe various reinforcement situations. This instrument was constructed on the basis on Rotter's (1966) definition of the internal-external control of reinforcement dimension. The measure was designed to assess whether the respondent perceives reinforcement for his or her behavior to be noncontingent (i.e., external locus of control), and allows for the assessment of perceived control over events.

Initially, 102 items were constructed in consultations with school teachers in order to make them readable at the fifth-grade level. Nine clinical psychology staff members were then asked to answer the items in an external direction. Items were dropped where there was not complete agreement among the judges. The 59 remaining items were given to a sample of 152 children ranging from grades 3 to 9. They found that internals scored significantly higher on an achievement test than did externals. The computed test-retest reliabilities for a 6-week period for an 8-11 age group (n=98) and a 12-15 age group (n=54) were .67 and .75 respectively. In order to make the scale more homogeneous, an item analysis was conducted resulting in 40 items being retained for the final version of the scale. This scale was administered to 1,017 elementary and high school students in four different communities. Estimates of internal consistency for grades 3 to 5, 6 to 8, 9 to 11, and 12 were .63, .68, .74 and .81 respectively. Test-retest reliabilities calculated for a six-week interval for grades 3, 7, and 10 were .63, .66, and .71 respectively. The scale was not found to be related to social desirability.

The authors suggested a short-form version of the test could be used with individuals in grades 7 thru 12. This short-form consists of 21 items and was used in the present study. Cronbach's alpha was calculated on the data from this study and found to be .84.

The *Optional Thinking Test* (OT; Platt & Spivack, 1977; Appendix H) is a measure of the capacity to conceptualize alternative solutions to a problem. The OT consists of four interpersonal problem situations for which the individual is asked to generate as many different solutions as possible.

Reliability data for the OT is scarce, though Cohen-Sandler (1982) reported a mean inter-rater reliability rating of 87%. The validity data come from a number of studies. Shure and Spivack (cited in Spivack & Shure, 1974) found that regardless of IQ, verbosity, and social class, children whose classroom behavior was rated as well-adjusted were better able to generate alternative solutions on the OT. Platt, Spivack, Altman, Altman, & Peizer (1974) found a normal control group scored significantly higher on the OT than a group of adolescent psychiatric inpatients.

Cohen-Sandler (1982) found suicidal children to be less efficient on the OT as compared to nonsuicidal children. McLeavey et al. (1987) found the OT to discriminate between self-poisoning patients, psychiatric patients and nonpatient controls, with the self-poisoning patients to be significantly lower than the other two groups. As well, the psychiatric group scored significantly lower than the non-patient controls. A relationship has not been established between the OT and depression in children (Mullins, Siegel, & Hodges, 1985).

The *Problem Solving Inventory* (PSI; Heppner & Petersen, 1982; Appendix I) assesses peoples' perceptions of their personal problem-solving behaviors and attitudes. The scale consists of 32, 6-point Likert-type items, where high scores indicate behaviors and attitudes typically associated with perceptions of effective problem solving (Heppner, Baumgardner, & Jackson, 1985). As the PSI measures one's appraisal of problem-solving skills, scores on the scale may not relate to other scales that measure actual problem-solving skills. In fact, Heppner and Petersen (1982) did not find responses on the PSI to relate to the Means-Ends Problem Solving Procedure, a purported measure of problem-solving ability.

Thirty-five items deemed by the authors to be valid measures of problem solving were administered to four samples of undergraduate students (ns=150, 62, 31, 18). These items were submitted to a factor analytic procedure and three factors were identified and labelled. The first factor, "problem-solving confidence", was described as confidence in engaging in a wide range of problem-solving activities. The second factor was labelled "approach-avoidance style" as, according to the authors, the central theme of the items which loaded on this factor involved whether an individual approaches or avoids different problem-solving activities. The third factor was labelled "personal control" as the items loaded on this factor involved elements of self-control.

Internal consistency was estimated (n=150) for the three factors and the total inventory as .85, .84, .72, and .90 respectively. Test-retest reliability was estimated by administering the inventory to 31 undergraduate students on two occasions over a 2 week interval. For the three factors and the total score the coefficients were .85, .88, .83, and .89 respectively.

In terms of concurrent validity, scores on the PSI were found to correlate moderately with scores on a self-rating scale of problem solving. People who responded to the PSI in a manner which reflected behaviors and attitudes typically associated with successful problem solving tended to rate themselves as better problem solvers, and tended to be more satisfied with their problem-solving skills.

To test construct validity, a study using a post-test only - control group design was conducted to compare a group of individuals who had received problem-solving training versus a control sample. The experimental group was found to score more positively on the PSI than the controls, though this result was only significant at the .05 level using the one-tail criterion. As the authors have stated that the scale does not measure actual problem-solving skills, but perceived problem-solving behaviors and attitudes, one would not necessarily expect training in problem solving to effect scores on the PSI.

In another study, Heppner et al. (1985) found that problem-solving appraisal was related to the number of personal problems reported. They also found the PSI to be related to both short- and long-term depression, though more strongly associated with the latter. Other studies by Heppner and his colleagues have found differences between high and low PSI scorers on a number of variables (Heppner, Hibel, Neal, Weinstein, & Rabinowitz, 1982; Heppner & Krieshok, 1983; Heppner, Reeder, & Larson, 1983). The scale was not found to relate to intelligence and social desirability.

Due to the overall magnitude of data being collected, it was necessary to reduce the number of items in the PSI. This was accomplished by selecting 16 items with the highest loadings from the factor structure reported by Heppner & Petersen (1982). Using the data from the present study, these 16 items were submitted to an item analysis. Item 4 did not behave consistently with the other items and was excluded from further analyses. The problem-solving confidence factor consists of items 3, 8, 10, 13, and 16. The approach-avoidance factor consists of items 2, 6, 7, 9, and 14. The personal control factor consists of items 1, 5, 11, 12, and 15. The Cronbach's alphas for these three factors and the total score were .86, .75, .76 and .90 respectively.

The *Semantic Differential* method (SD; Osgood, Suci, & Tannenbaum, 1957; Appendix J) was used to measure the individuals' attitudes toward attempted suicide. According to Tanney, Mortensen, & Tierney (1989), the Semantic Differential method has been the subject of over 2000 investigations which confirms its value as a method for discerning the meaning of a construct stimulus.

For the present study twenty-two adjective pairs were derived from previous unpublished work on attitudes toward suicide carried out in the province of Alberta. A recent factor analysis of these 22 items (Tanney et al., 1989) revealed a two factor solution. However, the data from the Tanney et al. (1989) study were obtained from caregivers and it would be questionable to assume that the results of this factor analysis could be generalized to an adolescent population. Therefore, a decision was made not to impose a factor structure upon the instrument. The responses of the 20 individuals in the present study on the 22 items were submitted to an item analysis. Seven items with low or negative correlations with the corrected total score were removed from the scale (items 2, 3, 6, 9, 10, 18, & 19). The Cronbach's alpha for the 15 item instrument was .91.

E. Questionnaire and Interview Analysis

The goal of this research was to develop a social information-processing model that could be used as a framework for examining the choice of a suicidal behavior. The model was developed through a multiple case study approach. According to Yin (1984), a case study is the preferred strategy when "how" or "why" questions are being posed, when the investigator has little control over events, and when the focus is on a contemporary phenomenon within some real-life context. In this form of research, the goal of the investigator is to expand and generalize theories (analytic generalization), not to estimate population parameters (statistical generalization) (cf., Mook, 1983).

Previously it has been incorrectly thought that the case study was but one type of quasi-experimental design (the one-shot, post-test-only design) but according to Cook and Campbell (1979), "the case study as normally practiced should not be demeaned by identification with the one-group, post-test-only design" (p. 96). The case study is a separate research strategy with its own research designs (Yin, 1984).

The general strategy for analysis within the case study framework is called "pattern-matching logic". This strategy compares an empirically based pattern with a predicted one. According to Yin (1984), in determining the fit of the pattern, available statistical techniques are likely to be irrelevant because the variables in the pattern will not have a variance, as each essentially represents a single data point. Therefore, one wants to carry out case studies in which the outcomes are likely to lead to gross matches or mismatches, and in which an "eyeballing" technique is sufficiently convincing to draw a conclusion.

In accordance with the guidelines suggested by Miles and Huberman (1984), the data were first reduced by coding quantitative data wherever possible, and by using summary sheets for each of the individuals. The data were examined for trends and common statements which often generated new ideas. Therefore, this involved a responsive approach whereby additional information was sought following new hypotheses or theories. Problem-solving models were also generated for each individual.

Exploratory data analysis techniques were used to examine the individual scores on the measures. The main technique involved plotting individual data for the comparison group along a continuum, and then dividing the scores into lower and upper quartiles. The individual data from the parasuicide group were then examined in the context of the comparison group data.

Conclusion-drawing and verification occurred throughout. This process is described by Miles and Huberman (1984) as follows:

> From the beginning of data collection, the qualitative analyst is beginning to draw conclusions, to decide what things mean, and to note regularities, patterns, explanations, possible configurations, causal flows, and propositions. The competent researcher holds these conclusions lightly, maintaining openness and skepticism but the conclusions are still there, inchoate and vague at first, then increasingly explicit and grounded. (p. 26)

t-tests were also calculated to determine significant mean differences between the two groups where the data lent itself to this analysis. These results must be interpreted cautiously due to the small number of individuals and the increase in chance findings due to multiple univariate analyses.

F. Constraints on the Study

Ethical considerations combined with a low base rate of parasuicide makes prospective and/or experimental studies in this area nearly impossible (Linehan et al., 1987). Consequently, the methods used to research questions in this area are often prone to specific weaknesses. Following are a number of areas that need to be considered when interpreting the results:

1. As the goal of this study was not statistical generalization but analytical generalization, the size of the sample and the sampling procedure make it difficult to generalize the results of the study to the populations in question. However, several variables describing the samples were collected which could aid readers in generalization.

2. Even though objectivity was aimed at in the data collection and analysis, the researcher recognizes that the method utilized is vulnerable to subjective interpretations. Detailed documentation of the data and the analysis procedures are described so that the reader can test alternative interpretations..

3. As data were collected after the crisis situation had occurred in the drug overdose group, the accuracy of the data is dependent upon the ability of the individuals to recall the details associated with the crisis event, and with their openness to reporting this data. Other factors such as cognitive dissonance (Festinger, 1957) and social desirability (Crowne & Marlowe, 1964) are also recognized as potential threats to the fidelity of the data. A multi-method approach contributes to the validity of the data.

4. As the data analysis proceeded in a responsive fashion, new hypotheses were formulated during the process. Information needed to support or refute these hypotheses was not always available from the information collected, so some questions were left unanswered.

5. Most of the instruments were administered prior to the interview schedule in order to standardize the administration procedure between the two samples as much as possible. However, the parasuicide group might not have been as motivated to participate in this portion of the study because they might have been anxious to discuss the circumstances surrounding the drug overdose.

Despite the limitations of this type of research, it is believed that the information obtained from this study will be extremely useful to those groups involved in the prevention and treatment of adolescent suicidal behaviors. As well, it is believed that this study makes a contribution to the theoretical explanations of adolescent parasuicide.

IV. DESCRIPTION OF THE SAMPLES

In this chapter a description of the samples will be provided along demographic and social variables. These include age, religion, parents' marital status and occupation, school and family difficulties, a history of physical and sexual abuse, a history of running away from home, and alcohol and drug use. The chapter will conclude with individual case summaries.

A. Descriptive Information

In order to protect the identities of the participants the demographic information will not be presented for each individual, but will be presented as group data. However, the social variables will be presented individually using an identification number assigned to each person. These numbers were assigned based upon the order in which the individuals were interviewed within their respective group. The individuals in the parasuicide group are identified by the numbers 01 thru 10, and the individuals in the comparison group are identified by the numbers 20 thru 29. These numbers will be referred to throughout the remainder of the dissertation.

Table 3 presents the demographic information for the two samples. The mean age of the parasuicide and comparison groups in years was 17.22 and 17.57 respectively, and ranged from 14 to 20 years. The age of the individuals was calculated in months and then compared using a t-test analysis. A significant difference was not found between the two groups ($t(18) = -.24$, $p < .05$).

The individuals were asked questions regarding their religious affiliation and frequency of church attendance because these variables have been found to relate to suicidal behavior in adults (Maris, 1981). Sixty percent of the parasuicide group and 70% of the comparison group reported a religious affiliation. In order to be classified as practicing their religion, individuals had to report attending a church service eight or more times during the previous 12-month period. When religiosity was taken into

Table 3

Demographic Characteristics of the Samples

	Parasuicide Sample Frequency	Comparison Sample Frequency
Religion		
Catholic	2	3
Protestant	1	1
Mormon	1	1
Evangelical	2	1
Jehovah Witness	-	1
No Religion	4	3
Regular Church Attendance		
Yes	2	5
No	8	5
Parents'/Guardians' Marital Status		
Married	7	7
Re-Married	1	1
Divorced/Separated	2	2
Father's Occupational Status		
Professional	-	3
Semi-Professional	2	-
Skilled Manual	4	3
Semi-Skilled Sales & Service	1	-
Semi-Skilled Manual	-	1
Unskilled	3	2
Disabled	-	1
Mother's Occupational Status		
Professional	-	1
Semi-Professional	1	1
Skilled Sales & Service	2	1
Semi-Skilled Sales & Service	3	3
Homemaker	4	4

account, a difference between the groups emerged. Only 20% of the parasuicide group reported that they had attended a church service more than eight times during the previous 12-month period, as compared to 50% of the comparison group. Maris (1981) also reported suicide attempters to be less likely than controls to attend a church service more than a few times per year.

A finding commonly reported in the research literature is that suicidal individuals are more likely to come from "broken homes" when compared to nonsuicidal individuals (Crook & Raskin, 1975; Hawton, 1986). In the present study, the marital status of the primary parents/guardians of the individuals was equally distributed amongst the two groups. Seventy percent from both samples reported that their parents were married. However, one individual from the parasuicide group had been living with guardians most of her life due to the death of a parent and consequently early loss due to death must be taken into account for this individual. One person from each group reported that her mother, with whom she lived, had divorced her biological father and had since remarried. Two individuals in each group were living in a single parent home, with their parents being either separated or divorced. The percentage of intact homes in the parasuicide sample is somewhat higher than might be expected, though Adam (1985) reported that studies since 1940 have found the incidence of "broken homes" in the histories of suicidal individuals to range from 17% to 76% depending upon the characteristics of the sample surveyed.

There have been inconsistent findings regarding the relationship between socioeconomic status and parasuicide. However, most studies have found that suicidal individuals fall within the lower-middle to lower class range (e.g., Jarvis, Ferrence, Johnson, & Whitehead, 1976; Lewis, Johnson, Cohen, Garcia, & Velez, 1988; McKenry, Tishler, & Kelly, 1982). In order to obtain an indication of the socioeconomic status of the individuals in the present study, questions pertaining to their parents' education, occupation and income level were asked. Unfortunately, parent's education and income level could not be used because most of the individuals could not provide this information. The full-time occupations of the parents of the individuals were classified by the Standard Occupation Classification (1980) system used by Statistics Canada. These categories were further collapsed using the revision of the Pineo-Porter-McRoberts Classification scheme (Pineo, 1985). The distribution of the parents' occupations across the occupational categories was similar, though there were more fathers in the comparison group holding professional occupations than in the parasuicide group (3 vs. 0).

Generally, both samples appeared to be fairly similar except with regard to religiousity. This is congruent with the findings of McKenry et al. (1982) who also found a sample of adolescent parasuicides to be demographically similar to a comparison group. In contrast, when selected social information was examined discrepancies between the two groups emerged. This information will be discussed in the following paragraphs and is presented in Table 4.

Many suicidal adolescents report problems in school, including poor academic standings, difficulties with teachers and/or peers, and a desire to leave school. However, these problems rarely appear to be directly related to the suicidal behavior (Hawton, 1986). Problems in school in the present study were assessed by asking the participants if they had ever been considered a discipline problem at school, had ever dropped out of school, or been suspended from school. Sixty percent of the parasuicide group, as compared to 10% of the comparison group, reported school difficulties.

Rosenkrantz (1978) stated that most studies have found suicidal adolescents to come from poor home situations characterized by disorganization, parental disharmony, cruelty, and abandonment. Family difficulties within the present study were assessed from participants' responses to questions regarding how well family members got along with each other, the participants' relationships with their parents,

Table 4

Social Characteristics of the Samples

	Parasuicide Sample Person Number	Comparison Sample Person Number
School Problems		
Yes	02 04 05 06 09 10	29
No	01 03 07 08	20 thru 28
Family Difficulties		
Yes	01 03 04 05 07	21 23 28 29
No	02 06 08 09 10	20 22 24 thru 27
Physical Abuse		
Yes	04	23 29
No	01 02 03 05 thru 10	20 21 22 24 thru 28
Sexual Abuse		
Yes	01 03 04 08	21 28
No	02 05 06 07 09 10	20 22 thru 27 29
History of Running Away		
Yes	01 02 04 05 10	
No	03 06 07 08 09	20 thru 29
Illegal Activities		
Shoplifting	01 02 10	26 29
Prostitution	04	
None	03 05 06 07 08 09	20 thru 25 27 28
Alcohol Intoxication		
Never	01 03 04 07	21 23 25 27
Few Times Ever	08 10	20 26 28
Less Than Once per Month	02 06 09	22 29*
Once per Week		24
1-3 Times per Week	05	
Drug Usage		
Never	03	20 21 23 thru 27
Few Times Ever	01 07 08 09 10	28
Prior History Only	02 06	
Less Than Once per Month		22
Once Every 2 - 3 Weeks	05	
More Than 3 Times per Week	04	29

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* Person 29 reported that up until five months ago she became intoxicated every weekend. She stopped drinking due to becoming very ill from the alcohol.

and whether they would describe their family as "close". Fifty percent of the parasuicide group and 40% of the comparison group reported family difficulties. However, the degree of difficulty was judged to be more severe in the parasuicide group.

Hawton (1986) reported that physical abuse by a family member is relatively common among youth who exhibit suicidal behaviors. For the present samples, one individual within the parasuicide group and two within the comparison group reported physical abuse by a family member. Sexual abuse has also been linked to suicidal behaviors in adolescents (L. S. Anderson, 1981; Bagley cited in Bagley & Ramsay, 1985). Two individuals within the parasuicide group and one within the comparison group reported being sexually abused by a family member, and two individuals in the parasuicide group and one within the comparison group reported being sexually abused by an acquaintance.

Acting out or deviant behaviors are often found in the histories of suicidal individuals (Jacobs, 1971). Maris (1971) explained these behaviors as coping mechanisms operating to preserve rather than to cripple life. Acting out behaviors were elicited in the present study by asking questions regarding running away from home, illegal activities, and alcohol and drug use. Fifty percent of the parasuicide group reported that they had run away from home at some time, as compared to no one in the comparison group.

In terms of involvement in illegal activities, excluding alcohol and/or drug use, the majority of individuals in both groups reported no involvement in illegal activities. Of those whom reported illegal activities, shoplifting was the most frequently reported activity. One individual in the parasuicide group indicated that she was involved in prostitution.

In response to questions on alcohol abuse, 90% of both samples reported that they became intoxicated less than once per month. However, when questions on drug usage were asked, the parasuicide group reported more experimentation with drugs, with only one person in the parasuicide group reporting that she had never tried drugs as compared to seven in the comparison group.

For most of the individuals within each group the acting out behaviors, such as running away and shoplifting, were "once only" behaviors and they often occurred when the individuals were younger. Only persons 04 and 05 within the parasuicide group, and person 29 within the comparison group were deemed to be exhibiting acting-out behaviors at the time of the interviews.

Most studies have reported larger discrepancies between suicidal adolescents and comparison groups on a number of the above variables than were found in the present study. However, many of those studies did not control for the sex of the individual, the method and lethality of the suicidal behavior, or the presence of prior suicidal behavior. It is not surprising, then, to find that the individuals within the present study had somewhat different characteristics when compared to individuals within studies that have combined all forms of suicidal behavior.

B. Case Summaries

For the remainder of this dissertation, the individual data for each participant will be presented wherever possible. To facilitate readers in interpreting these data, and/or in exploring their own hypotheses of the data as it is presented, a brief description of each of the individuals will be provided. The histories of the individuals have been somewhat altered to protect their identities, without distorting the essential information.

Upon examining the individual case histories, it was possible to group the individuals into four clusters[1]. The individual summaries will be presented within their corresponding clusters. The first cluster consists of individuals who reported that their problems had not persisted over an extended period of time but were confined to recent difficulties within current relationships. These individuals reported family and social support, and were believed to be similar to the "normal" population. The second cluster includes individuals who were dealing with an unresolved issue. These individuals described their families as close and reported they had support systems both within and outside their families. The third and fourth clusters includes individuals who were struggling with major difficulties within their family system. These two groups are differentiated based upon the degree of family dysfunction, and the presence or absence of protective factors.

These clusters can be compared to the three categories of adolescent parasuicides defined by Hawton, Osborn, O'Grady, and Cole (1982). These authors classified individuals based on the duration of their problems, and the presence or absence of behavior disturbances. The first group was labelled "acute". The problems identified by the individuals within this group had persisted less than one month, and there was an absence of behavioral disturbance. Their problems were almost entirely confined to difficulties within current relationships, most often with their parents. Hawton, Osborn, O'Grady, and Cole (1982) described this group as most similar to adolescents in general and it is similar to the first cluster in the present study.

Hawton, Osborn, O'Grady, and Cole (1982) labelled their second group as "chronic". The problems of the individuals within this group had persisted for more than one month, and the individuals did not presently exhibit any behavioral disturbances. This group would be similar to the second and third clusters in the present study.

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[1] When the data was analyzed no apparent relationships were found based on cluster membership. Therefore the use of clusters seems to be more useful for descriptive purposes than for discriminating purposes.

The third group defined by Hawton, Osborn, O'Grady, and Cole (1982) was labelled "chronic with behavioral disturbance". The problems for these individuals had persisted for more than one month, and were accompanied by recent behavioral disturbances. Problems with alcohol and drug abuse were almost totally confined to individuals in this group and they also had the most family pathology. This group is most similar to the individuals within cluster 4 of the present study.

Cluster 1: "Normal Teenagers"

Cluster 1 is comprised of two individuals from the parasuicide group and four from the comparison group. The individuals within this cluster could best be described as "normal" teenagers who were struggling with some current issues, but not to the same degree as the individuals in the other three clusters. They appeared to have come from fairly stable family situations, and they did not report a high degree of acting out behavior. No alcohol or drug abuse was indicated.

Person 08 was 14 years of age and the youngest child in a family of five children. In terms of her school history, she indicated she had to repeat two elementary grades, once due to hearing difficulties and once due to "not liking" her teacher. When she was asked if she had ever been considered a discipline problem at school she responded, "I never sat out a class in my life". She stated she had only been intoxicated twice ever, and that she had experimented with drugs twice. She had never run away from home and had never been involved in any illegal activities.

Person 08 described her parents' relationship as "strong", and her relationship with her father as"good". She valued her time with him because he was only home 2-3 days per week due to employment requirements. She indicated that she was "pretty close" to her mother, but that their relationship did not seem as special because she could see her all the time. She described her family as "close".

Person 08 stated that if she needed help with a problem she would have gone to her sister under all circumstances. She also indicated that she would have preferred help with a problem as "it would be easier". Her sister, a friend, and a school counselor were listed as people she could have turned to for support.

Person 08 reported that she was sexually molested from ages 3 to 7 by a relative. She informed her parents of the abuse and they notified the police, though no charges were laid. One could speculate that the abuse was related to her problems in school. However, the absence of a history of self-destructive behaviors, her positive relationships with her family and friends, her help-seeking behaviors, and her own self-report would indicate that, at the time of the interview, it was not an issue for her.

Person 08 stated that her goal for the future was to be a social worker. If she could have made some changes in her life they would have been "not to be so insecure" and not to succumb to peer pressure. As well, she would have liked to have been in the same grade as her peers.

On the day person 08 took the drug overdose two male friends confronted her at school and accused her of "leading them on". They were very angry with her and she reported that all day they "screamed" at her and gave her "dirty looks". She went to the school counselor for advice. She wrote the key individuals letters explaining her position, and she tried talking to her mother about the problem, but the situation was not resolved. That evening she called one of the key individuals, who was the most important to her, to apologize but he would not accept the apology. She went to her room and listened to "sad" music and took the drug overdose. She contemplated taking the overdose for five minutes.

Person 10 was 16 years of age and the second youngest child in a family of four children. When person 10 was 11 years of age she suffered a severe head injury in a car accident, and she reported that the long-term effects included migraine headaches. Lezak (cited in Kolb & Whishaw, 1985) stated that individuals with severe head injuries often suffer from a number of impairments including "impulsivity, irritability, and low frustration tolerance" (p. 121). Person 10 appeared to display these impairments. For example, she was suspended in Grade 7 for fighting with another student, and she was asked to quit school in Grade 9 for "flipping out" at the school counselor. As well, she stated that she would have liked to have been more understanding to other people and "just because they're rude to me I don't have to be rude back."

In terms of alcohol and drug use, Person 10 reported she had only been intoxicated once, and that she had only experimented with drugs a few times. In terms of illegal activities, she shoplifted once when she was 14 years of age. She was caught in this act of shoplifting and ran away from home because she "didn't want to tell her dad".

Person 10 described her parents' relationship, and her relationship with her mother, as "really good". She stated that during the past six months she had also been getting along "really good" with her father, though prior to that they used to fight a lot. She felt that her family was close because they did "a lot of things together".

Person 10 indicated that she did not like asking people for help because she would have felt indebted to them. On the other hand, if she had a problem that she could not work out on her own she would have asked someone for help. She felt she could have gone to her sister or a close friend for support.

In terms of the future, Person 10 wanted a career helping others. She stated that she would have obtained this goal by "going to school for a long, long time". This was perhaps an unrealistic goal due to her past school history. If she could have made some changes in her life, she would have changed her attitude so that she was "more understanding to everyone else".

On the night person 10 took the drug overdose she had an argument with her mother. Her cousin had been living with her family for the past month and she had a "crush" on him. He was supposed to go to a party with her the following evening but he decided to do something else. Person 10 argued with her mother in an attempt to persuade her to make her cousin go to the party, but to no avail. She stated that she started "freaking out" at her mother. Her mother became angry so person 10 went to her room. She thought about taking the drug overdose but decided to try and talk to her mother again. She approached her mother but she was not responsive, so person 10 went to her room and took the drug overdose.

Person 20 was 14 years of age and the second youngest in a family of four children. She reported she got along with the other people at school and that she had never been a discipline problem. She had never tried drugs, and she became intoxicated for the first time during the previous 3-month period. She had never been involved in any self-destructive behaviors.

Person 20 appeared to come from a stable family background. She described her parents' relationship as "good". She described her relationship with her father as "regular - no problems", and her relationship with her mother as "really good". She felt that her family was close in that they were always together, and that they communicated openly with each other.

Person 20 indicated that she would have preferred help with a problem and that she would have gone to a friend for help under all circumstances. She stated that she had an aunt, a friend, and a school counselor that she could have turned to for support. She had many long-term friendships.

Her goals for the future were to own a business and to help people. She indicated that she would obtain these goals by working hard. When asked if she could make some changes in her life what would they be, she responded, "life is good", though she indicated that she would have liked her parents not to check up on her as often.

Person 25 was 15 years of age and the middle child in a family of five children. She came from a strong religious background and her values appeared to reflect this upbringing. She reported she had never had any difficulties at school or with her friends. She had never tried alcohol or drugs.

Person 25 described her parents' relationship as "really good". She also described her relationship with her father and mother as "really good". She stated that her family was close and that they were very protective of each other. She felt that they communicated openly and that they knew "everything about each other".

Person 25 indicated that if she needed help with a problem she would have gone and asked someone for help as "it's just natural - I was brought up that way". She also indicated that she would have preferred help with a problem, as opposed to dealing with it on her own, because she liked to get other people's opinions. Her mother, friends and a church advisor were all listed as people she could have gone to for support. She reported many long-term friendships.

Person 25 wanted to be a teacher. She stated that if she could have changed anything in her life it would have been to be smarter, to be more athletic, and to have had more brothers and sisters.

Person 26 was 16 years of age and the youngest child in a family of three children. She came from a traditional ethnic family. She had never had difficulties in school or with her friends. She only consumed alcohol at home with her family and had never tried drugs. Person 10 was caught shoplifting when she was 10 years of age but was never charged.

Person 26 described her parents' relationship as strong. She described her relationship with her father as "good now". She stated that he used to be very strict regarding allowing her to go out with her friends, but he had become more lenient.

She believed the change in his approach to her might have been due to the fact that she had been showing more responsibility. Person 26 described her relationship with her mother and the other members of her family as "good". She felt her family was close, in that they hardly ever fought, though she stated they did not communicate openly with each other as they "don't share problems".

Person 26 stated that if she needed help from someone she would have gone to her sister under all circumstances. She indicated that she would have preferred help with a problem because her sister was older and she understood more. She felt she could have turned to a friend for support, but that she would not have gone to her regarding family problems. She was not aware of any outside source she would have gone to for help. She had one close friendship of a 1-year duration.

Person 26 indicated that she saw a "good career" in her future. Her goals were to find a boyfriend and to do well in school. If she could have changed anything in her life, it would have been her dad's personality so that he would have let her have more freedom.

Person 27 was 19 years of age and was enrolled in her 2nd year of university. She reported that she was an above-average student. She was an only child and was born to older parents. She revealed that she was picked on by the other children at school until she was in Grade 10 , at which point she had no more problems with the other students. Person 27 never consumed alcohol or took drugs.

Person 27 described her parent's relationship as "good",and her relationship with her mother as "good" and "really close". She felt her relationship with her father was "good", but that she was not as close to him as she was to her mother. She also described her family as close because they got along and they listened to each other.

Person 27 stated that if she needed help from someone she would have gone to her mother if the problem was serious, and to her friends for less serious problems.

She would have gone to these people for help because she trusted them and they could have related to her. She also stated that she preferred help if the problem was serious because "someone might have a different perspective". She felt she could have gone to her parents and a friend for support under all circumstances, and she indicated that she did ask her parents for help most of the time. She also mentioned that there was a counselor at school she could have accessed, but that she would not have gone to him because she felt the problem would have been personal and he would not have known her background. She had one long-term friendship.

Person 27's goals for the future were to be a teacher and to have a boyfriend. If she could have made some changes in her life, she would have been more patient.

Cluster 2: "Persons with an Unresolved Issue"

This cluster is comprised of three individuals from the parasuicide group and two from the comparison group. The individuals within this group were characterized, not so much as having to deal with ongoing family problems, but as having an unresolved issue that they had been avoiding. Though there may have been some conflict in the home, these individuals described their families as "close" and they indicated that they could communicate with family members. No current alcohol or drug abuse was indicated, though there may have been a history of drug abuse. For the individuals within the parasuicide sample, they brought up the unresolved issue during the interview in the context of their suicidal behavior.

Person 02 was 18 years of age and she was an only child. Her mother died when she was eight years of age and her father had "never been in the picture". When she was asked about her mother, she indicated that she "wasn't a very loving child toward her" though she "loved her very much". Person 02's aunt and uncle had been her primary caretakers since her mother's death.

Person 02 attended boarding school during grades 7 to 9 and then returned to live with her aunt and uncle during high school. She moved out of her aunt and uncle's house in Grade 11 because of "independence issues", and shortly afterwards went to live with her grandparents. Her grandmother died of a heart attack approximately one year prior to person 02's participation in the study. She was present at the time of her grandmother's death. She was still very upset about her death and indicated that she had trouble "getting her dying face out of my mind".

While person 02 was in boarding school she was considered a discipline problem, and she was suspended from school for using drugs. When she was 16 she was heavily involved in shoplifting. She also reported that she had been very sexually active since the age of 15.

Person 02 described her relationship with her aunt as "good" before she went to boarding school, but that since that time there had been some conflict regarding independence issues. However, she described this family unit as close because they "did a lot of things together", and she indicated that they communicated openly with each other.

In terms of social support, person 02 indicated that she would have gone to her aunt for help only if the problem was related to money or school problems. She also indicated that she would have preferred to deal with most problems on her own. She felt she could have gone to her friends or a guidance counselor for support, and that she did not keep her problems inside, though she did not "take advice".

Person 02 indicated that she did not see very far into the future, but that she hoped to have a successful career like her aunt. She also had plans to go to university. She viewed her employment opportunities as good, and she stated, "if I want to do something I can go and do it".

On the night person 02 took the drug overdose she had been drinking alcohol at her boyfriend's house and a fight erupted. She went to another room where she felt her asthma bothering her. She went to take her asthma pills and "started shovelling them in like a steam shovel".

The issue for person 02 surrounds unresolved grief issues stemming from her mother and her grandmother's deaths. She reported that at the moment she took the pills she wanted to be dead so that she could be with her grandmother "to get a hug". She stated that she felt an incredible need to see her grandmother and that the feeling was "overwhelming".

Person 06 was 18 years of age and the youngest child in a family of six children. She dropped out of school in Grade 11 and again in Grade 12 because she was "bored". She had just over one month left in the school year, though she indicated that she "skips a lot of classes" and was only passing one class when she quit.

In Grade 9, person 06 was heavily involved in drug use as she "got in with a bad crowd". She stated that she quit taking drugs after a year because "they burn you out". During that time she was also suspended from school for an alcohol related incident. At the time of the interview, person 06 reported that she did not engage in drug use and she consumed alcohol infrequently.

Person 06 described her parents as "kind of close". She felt that they were no different then her other friend's parents, in that they had occasional fights, but that they were basically "normal". She described her relationship with her father as "sort of close", and that even they hardly ever talked, they hardly ever argued. She mentioned that she fought quite a bit with her mother, and that her mother was old-fashioned in that she lectured her about what she did when she was younger. However, she felt that they could still talk. She described her family as close, and she indicated that family members communicated openly with each other in that they would say what was on their minds.

Person 06 indicated that she would have gone to her friend or her brother for help with a problem, though she preferred to deal with problems on her own. She also stated she would have gone to her siblings and friends for support. She could not identify an outside source such as a teacher, school counselor, or minister that could have provided her with help.

When asked what she saw in her future, she responded she did not plan for the future and that she did not have any goals. She indicated that she saw her employment opportunities as scarce, and that she foresaw herself jumping from job to job. If she could have made some changes in her life, they would have been to have "had my own life", including having had some privacy, and to have been able to have made her own decisions.

On the night person 06 took the drug overdose she had been drinking with some friends at a bar. She had a fight with her boyfriend and drove home by herself. She went into the kitchen and saw a bottle of pills and took them without any premeditation. She then went all over the house looking for more pills.

The unresolved issue for person 06 seemed to involve independence issues. She indicated that she took the pills at this time, as compared to previous times, because she "was younger then and didn't have to be grown up". She said that now she was 18 she was having to think about her future. She stated that her parents were putting pressure on her not to quit school and not to let them down. When she quit school she felt she had let them down. She also indicated that her sister-in-law gave her little privacy and had been putting pressure on her to get a job. When she did get a job she was left with the impression that it was not good enough. She indicated that she was feeling pressure from her mother and her sister-in-law and that she kept the feelings inside and then all of a sudden it "exploded".

Person 09: was 20 years old and the youngest in a family of four children. At the time of the interview she was working in a semi-professional capacity. She reported that in junior high she was involved with a "wrong crowd" and had become involved in a bit of trouble, but that it only lasted for the year as most of her group were transferred to another school. She indicated that she was looked upon as a leader and that she was suspended from school in Grade 8 because she told everyone not to go back to class. She reported that she was not a heavy drinker.

Person 09 described her parents' relationship as "incredible" in that they were really close and she had never heard them argue. Her relationship with her parents was described as "really good", and she felt her family was close in that they did a lot of things together. She indicated that her family communicated openly with each other and that "everybody knows everything".

In terms of accessing social support, person 09 indicated she would only ask for help from people that she really trusted. She stated that she preferred help with a problem because she liked to get other people's ideas. She listed a friend and her sister as people she could go to for support, though she did not have any outside resources that she would access. She had many long-term friendships.

Person 09 indicated that her goals for the future were to be married and to have a family, a house, and job advancement. She saw herself having success in her work and having material possessions. She indicated she would obtain these goals through hard work and planning.

On the night person 09 took the drug overdose she had been drinking at the bar with her friends. She had a serious fight with her boyfriend and he left the bar with another woman. She went to his house to talk to him but he became angry with her. She went home and drank some more alcohol. She took some Tylenol for a headache and then approximately 15 minutes later she looked at the bottle of Tylenol on the table and impulsively took the pills. She stated, "it was like bang - gone before I knew it".

When person 09 was 13 years of age her brother's girlfriend spread a rumor that person 09 was having an affair with her cousin. She felt this issue had never been resolved and she reported that she still felt awkward when she saw any of her relatives. She stated that it had caused her parents a lot of pain, but that the issue had always been avoided and no one would talk to her about it. She indicated that the situation with her boyfriend made her feel like she did when she was younger when no one would talk to her about the rumors surrounding her and her cousin.

Person 22 was 20 years of age and the middle child in a family of three children. She reported that she had never been in trouble in school and had never had peer problems. When she was 15 years of age, both she and her sister were heavily involved in drugs which resulted in many family arguments. She moved to another city to live with her brother so that she could get off the drugs. At the time of the interview her sister was still battling a drug problem. She indicated that she had "many" sexual partners since the age of 14.

Her mother and father had been living in separate residences for about five years due to employment restrictions. She described her parents' relationship as "good", and her relationship with both her parents as "really good". She indicated that she got along "great" with the other members of her family. She felt her family was close, in that everyone related to everyone, and there was always a feeling of support. She also stated that they communicated openly with each other.

Person 22 indicated that she would have asked someone for help if she could not have solved a problem on her own, but that she preferred to deal with problems by herself. Her sister, close friends, and a lawyer were listed as persons she could have gone to for support. She had two long-term friendships.

Person 22 indicated that in the future she saw herself having a lot of money, and a good husband. Her goals were to get a university degree. When she was asked how she viewed her employment opportunities, she indicated that she could have had anything she wanted. She would not have changed anything in her life but would have just furthered herself.

Person 22 was included in this cluster because specific information she provided left the researcher wondering if there was some family issue that was unresolved.

For example, when she was 15 she was having conflicts with her parents and she was heavily into drugs. In order to deal with the drug problem she reported that she moved to another city to "get away from friends and family". In addition, she indicated on the Help Seeking Questionnaire that she would not go to her parents to ask for help if she was having a problem with a boyfriend even if she was guaranteed that the outcome would be positive. She also reported "many" sexual partners. Based upon this information the decision was made to include her in this group.

Person 24 24 was 19 years old and the oldest in a family of three children. At the time of the interview she was attending university and was very active in "a lot of sports". She had never had problems in school or with her friends, and had never tried drugs. She indicated though, that she consumed alcohol 3 - 5 times per week, and became intoxicated once per week.

Person 24 described her parents' relationship as "fairly good", and her relationship with her father as "very good" . Her relationship with her mother was described as "good", but that it was "off and on". She felt her family was close, in that they "helped each other through everything",and that her family usually, but not always, communicated openly with each other.

She indicated that she would have gone to a friend if she needed help from someone, but that she preferred to deal with problems on her own because "I always like to do things my own way". She also indicated that she could have gone to family members or a friend for support, though she could not identify an outside source she would access. She had several long-term friendships.

When asked what she saw in her future, she responded that the previous year was rough, but that she saw the future as brighter. Her goals were to make it through university, to find a good job, and to settle down with someone. If she could have made some changes in her life, she would have gone back to the past with what she presently knew, so that she could have handled situations differently.

During the previous year person 24 had been having medical difficulties. The medication she was prescribed made her face swell and consequently she had been quite depressed about her health and appearance. She seemed to have dealt with the feelings aroused by this problem by avoiding them.

Cluster 3. " Family Difficulties with Protective Factors"

The next two clusters are comprised of individuals who had difficulties that stemmed from their family situations. The distinguishing factors between Cluster 3 and Cluster 4 are whether the individual appeared to be coping with her situation, as evidenced by the absence or presence of self-destructive behaviors, and whether there was evidence of protective factors (e.g., Rubenstein et al., 1989) such as being able to have secured support from her social network.

Cluster 3 includes two individuals from the parasuicide group and three from the comparison group. These individuals had been involved in a long-term conflict with one or both parents that they had been unable to resolve. They did not have a history of acting out, and seemed to be coping outside the family situation in that they had established close friendships and reported outside sources they could have gone to for help and support. They did not have a history of behavioral disturbances or alcohol or drug abuse.

Person 01 was 16 years old and the oldest child in a family of two children. She reported that she had never been in trouble at school, and that she had run away from home once at the the age of 13 following a fight with her mother. She never consumed alcohol and she tried hash oil on one occasion. She was caught shoplifting at age 10.

Person 01's mother was a gambler with an extensive psychiatric history. She indicated that the family was in debt due to her mother's gambling and she found this situation very stressful. Her father appeared to be ineffectual. Person 01 stated that he listened to what her mother had to say and made excuses for her. On the other hand he did not support person 01, as she stated that he would have told her that this was her problem and she would have had to solve it herself.

Person 01 felt that her family would have been close if she was not included in the family because she could not get along with her mother. She said the major arguments were between her and her mother and that they were regarding money matters. The conflict surrounded her mother's "lies and the casino".

If she needed help with a problem she would have gone to a friend under all circumstances, though she would have preferred to deal with problems on her own. She indicated she had two very close friends, a teacher, an aunt and and adult friend that she would have gone to for support. Person 01 had two long-term friendships.

Person 01 saw herself having a happy future. Her goal was to be a stewardess and she viewed her employment opportunities as good. If she could have made some changes in her life, she would have had a happier family with a mother "that would talk and wouldn't scream at you."

The night person 01 took the drug overdose she had a fight with her mother. Her mother told her that she was a failure and asked her why she could not be like her brother. She also had a fight with her boyfriend earlier in the day. She reported that she thought of taking the pills shortly after her mother and brother went out. She tried calling her friends to talk but no one was home. She also tried calling her boyfriend but he was not home either. After approximately one hour of contemplation she took the drug overdose.

Person 07 was 14 years old and was the youngest in a family of three. Her parents were divorced and her father was engaged to be married. Person 07 reported that she had never been been in trouble in school. However, during the previous 2-3 month period she had been getting into fights with other kids for no apparent reason, and she had tried pot for the first time. She reported that she had tried to run away from home twice. The first time was when she was 12 years of age over a fight with her mother and the last time was during the previous 2-month period. There appeared to be an escalation in her acting-out behavior over the previous two months, perhaps due to the approach of her father's wedding. Prior to this time there had been minimal acting out.

Person 07 indicated that her relationship with her father was "excellent" until his girlfriend came along approximately 3-4 years ago. Up until that time she stayed with her father every second weekend, but at the time of the interview she indicated that her relationship with her father was "bad", and that they were always fighting over his girlfriend. She stated that she never saw him. The intensity of this problem had increased during the previous three months since the announcement of her father's plan to remarry.

Person 07 described her relationship with her mother as being on a "talking basis". She indicated that they only talked when they had to, and that this had been going on since she tried to run away approximately two years ago. Even before that time they "never really talked".

She indicated that if she needed help from someone she would have gone to her sister, except if the problem was related to a fight with a friend. She reported, though, that she would have preferred to deal with problems on her own. Person 07 had a best friend, a sister and a school counselor she could have gone to for support.

Her goals for the future were to be a professional speed skater. If she could have made some changes in her life they would have included having had a mother that trusted her, and having had her dad marry another woman.

On the morning person 07 took the drug overdose she had a fight with her mother, because her mother did not believe she felt sick. She took some pills with the intention of making herself sick and went to school. She told the nurse she was sick and the nurse called her mother, but her mother still did not believe her. Later that night she decided to take a drug overdose. She wrote a letter to her mother outlining all the reasons she was taking the pills, including her father's marriage plans and her problems with her mother. She also included in the note the number and type of pills she had taken. She then took the drug overdose.

Person 21 was 18 years of age and the oldest in a family of three children. She was a high school graduate and, at the time of the interview, was working part-time in a semi-professional capacity. She had never had any problems in school, except that she was teased in junior high because she was "skinny" and because of her religious affiliation. She reported that she had never become intoxicated or experimented with drugs, and that she had never been involved in any other self-destructive behaviors.

Person 21's parents were separated and they had previously been separated on two other occasions. Her mother left her father in all instances. Her father had been unable to hold a job and her mother was living on social assistance. Person 21 indicated that she was molested by her father from the age of 13 until she was 17. She told her mother about the abuse and her mother believed her, though no action was taken against him.

Person 21 described her parent's relationship as nonexistent, and that there was bitterness and hostility. She described her relationship with her father as "not bad but not close", and her relationship with her mother as "very close". She indicated that she got along "really good" with the other members of her family, but she did not feel her family was close because when her parents separated the family became divided. She did state that the family communicated openly with each other.

Person 21 indicated that if she had needed help from someone she would have gone to them and asked for help as "they might not know I need help". In addition, she would have preferred help with a problem as you would "feel close and that you could both support each other and therefore avoid loneliness". She had many people she could have gone to for support under all circumstances including a friend, her parents, and a minister. She had been seeing a family doctor once per week for the previous 4-5 month period regarding family problems over her parents' separation. She reported that she had one long-term friendship.

In the future, person 21 saw herself being married with no children. Her goals were to "stay with" her religion and to move out of the house with her friends. She also indicated that she wanted to get some counseling regarding her religious beliefs. If she could have made some changes in her life she she would have increased her living standard, had her family back together, and kept a good relationship with close friends.

Person 23 was 15 years old and the oldest in a blended family of three children. She had just completed Grade 9 and she indicated that she was an above average student. She had never tried alcohol or drugs.

Person 23's parents separated when she was eight years of age. They both remarried approximately one year following the divorce. She described her mother and step-father's relationship as "good", and that they "love each other". She described her relationship with her mother as "really good" and her relationship with her father as "normal". However, her relationship with her step-father was described as "not too hot". She indicated that he physically assaulted her by hitting her hard enough to leave bruises on her arms, back, and face and that this happened approximately once per week. She stated that her mother knew about the abuse but that she "doesn't do anything about it so it must not be wrong". She indicated that she got along with her step-mother and the other members of her family. She felt her family was close in that they talked about problems and did things together. She also said that they communicated with each other.

She indicated that if she needed help from someone she would have asked for help under all circumstances, and that she would have preferred help with a problem as "it would be easier with help". Person 23 indicated that she had five close friends, her dad, her grandmother, a teacher and a school counselor that she could have gone to for support.

Person 23 saw herself as being successful in the future. Her goals were to go to university, to get married, and to have a family. When asked if she could make any changes in her life what would they be, she indicated she would "make things easier at home".

Person 28 was 19 years of age and was an only child. At the time of the interview she was enrolled in a college program. She reported that she had never been in trouble at school or had problems with her friends. She had only been intoxicated once in her life, and she experimented with drugs twice when she was 16 years of age.

Person 28 was engaged to be married. She described her relationship with her fiance as "fantastic". She described her parents' relationship as "healthy and happy". She described her relationship with her mother as "good", though she did not get along with her father as "we are too much alike". She stated that they argued about everything. Also, she did not feel that her family was close because she stated her parents worked too much and she fought with her father. She explained, "they make a great couple but they shouldn't have had a kid". She also stated that her family did not communicate openly with each other "unless you call being angry open". Her father was described as very controlling and she still had a curfew of 12:00 p.m. Person 28 stated that she was the center of conflict every day and that the conflict was never resolved.

She indicated that she would have gone to someone for help if she needed help, probably her mom. However, she would have preferred to deal with a problem on her own because she wanted her independence and "that's the first start". She did indicate that if she could not have solved a problem on her own she would have asked for help. She felt that she could have gone to her mother for support regarding minor problems, but that she dealt with major problems on her own as their "relationship isn't that strong". She could have turned to her friends and a priest for support under all circumstances. She had many long-term friendships.

Person 28 was raped when she was 16 years of age by an acquaintance. The only person she had told of this experience was her fiance. She had never gone to a counselor regarding the assault because she was not yet comfortable with it. However, she reported that she knew the resources she could have gone to when the time was appropriate.

When person 28 was asked what she saw in her future she responded that she saw a house with a picket fence. She viewed herself as being happy and very prosperous. One of the changes she would have made in her life would have been not to have tried so hard with her dad as, "I tried hard and it didn't work".

Cluster 4: "Family Difficulties without Protective Factors"

The individuals in cluster 4 had the most serious problems that seemed to stem from extremely dysfunctional family situations. They are differentiated from the previous group in that these individuals did not appear to have strong social systems that they would call on for support. There are three individuals from the parasuicide group and one from the comparison group. Three out of the four individuals reported current alcohol or drug abuse.

For the individuals within the parasuicide group, the overdose appeared to be a response to a termination of an extremely important relationship. Jacob's (1971) description of the progressive isolation experienced by many adolescent suicide attempters that culminates in the dissolution of any remaining meaningful social relationships in the days and weeks preceding the attempt would be applicable to these individuals.

Person 03 was 20 years of age and the youngest in a blended family of six children. She had never been in trouble in school or with the law. As well, she never drank alcohol to excess, and had never tried drugs[2].

Person 03's parents separated three months ago and she indicated she had seen it coming for years. She reported that she was finding it difficult to adjust to the separation. Her mother's boyfriend moved in with her mother approximately six weeks after the separation but he moved out on the day person 03 took the drug overdose.

Her father had been chronically unemployed due to a physical illness. This resulted in financial difficulties and as a consequence they changed residences many times. Her brother was an alcoholic and he had spent time in a hospital to "dry out". Person 03 described her parents relationship as "disrespectful to each other" and she indicated they did not communicate with each other. Before the separation she "hated" her dad, but following the separation she tried to see his side. She had not been getting along with her mother for approximately one year because she had been trying to be more independent and her mom "doesn't want to let go". She did not feel that her family was close as she stated that they did not respect anyone else's opinion.

Person 03 reported that she tried to deal with problems as "lightly as possible", and that they "will go away if I put them under the rug". She also stated that she would not have told someone if she was angry and would not have gone to someone for help. In terms of friendships, she had only "party friends" and she did not share anything with them. She appeared to have difficulties getting close to others. She indicated that there was someone both within her family and outside her family that she could have gone to for support, but that she would not have gone to them. She did reveal that she had seen a minister regarding her family problems but that it "didn't help".

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[2] The absence of self-destructive behaviors would normally be puzzling. However, Stephens (1987) identified two social and psychological patterns of female suicide attempters. The first pattern conforms to the prevalent image in the suicide literature of defiance, rebelliousness, acting out behaviors, drug involvement and indiscriminate sexuality. The second pattern is in sharp contrast to the first pattern and is characterized by overconformity, docility, passivity, and emotional submergence. Person 03 appeared to resemble the second pattern, while the remaining three individuals within this cluster resembled the first pattern.

In the future, person 03 saw herself being a very independent person, and she wanted to travel and see the world. At the time of the interview, she was enrolled in a college program and she did not see any problems in terms of her employment opportunities.

The afternoon person 03 took the drug overdose her boyfriend had told her he wanted to break off their relationship because there was "nothing in the relationship to keep it going". This was her first boyfriend and she took the break-up very hard. She went to her room and took four Demerol pills, possibly to relax. Ten minutes later she took ten more pills, and then ten minutes after that she took a few more.

Person 04 was 15 years of age and the youngest in a family of five children. During the past year she had lived in four group homes and at the time of the interview she was living with her boyfriend's family. She indicated that she had problems getting along with the other people at school because "I don't like being around males". As well, she was considered a discipline problem due to skipping school. She reported that she did not abuse alcohol but that she took soft drugs 3 to 5 times per week. She also reported being involved in prostitution.

Person 04 reported a family history of alcohol and drug use. She indicated that her father had a history of alcoholism and that he "goes on a bender" once or twice per year. She described her parents' relationship as "not close", and her relationship with her father as "not good", but that when she was living at home it was "OK". She stated that she did not have a relationship with her mother and that her sister raised her. She felt she had a good relationship with two of her siblings but that her two older brothers brothers sexually abused her for many years while she was living at home. When she told her parents about the abuse they did not believe her. She also reported physical abuse by family members, boyfriends and strangers.

If she needed help with a problem she would have gone to her sister under all circumstances. When asked if she would have preferred help, she responded that it would have depended on the situation. For example, later on in the interview she stated that she would not have asked for help with a "boyfriend problem". In terms of friendships, person 04 had a lot of "downtown" people as friends, but only had one close friendship of an 8-month duration. She felt she could have gone to her sister and her friend for support, but that she had no outside source she could have gone to for help.

When Person 04 was asked what she saw in her future, she responded that she saw nothing in her future and that she could not see herself doing anything until her problems were solved. She stated that her goal for the future was to solve her problems through seeing a psychiatrist. If she could have made some changes in her life, she would have proved to her parents that they were wrong and that she was abused.

At the time person 04 took the drug overdose she had been living at the house of her boyfriend's mother. That day her boyfriend told her he wanted to break off the relationship which would mean that she would have had to live elsewhere. She took five sleeping pills to go to sleep but she woke up a while later crying. She told her boyfriend that she had been crying and his response was to laugh at her. She went back to sleep and woke up crying again. She threw a book at her boyfriend and then started to take the sleeping pills one at a time while he watched. She took about 25 pills during a one-minute time period.

Person 05 was 19 years of age and the second oldest in a family of five children. She dropped out of school in Grade 10 because she did not think she "could make it". At the time of the interview she was unemployed. When she was in school she had problems getting along with the other people and was considered a discipline problem due to fighting. She was also suspended from school for skipping. Person 05 indicated that she consumed alcohol 3 to 5 times per week, and that she became intoxicated 2 times per week. She stated that she had received warnings from the police for fighting when drinking. She ran away from home when she was 14 years of age, and again when she was 15 due to "not being given enough space", having strict curfews, and not being allowed out.

Person 05's mother remarried when person 05 was five years of age. Her biological father came back into her life when she was 13 and this caused problems with her stepfather. She stated that up until that time she was close with her stepfather but that currently they were not close. Her father was an alcoholic and her step-father had a prior history of alcoholism. She stated that her step-father's drinking had caused problems within the family, and he was seeing a psychiatrist because he "blows up". Her mother appeared to be a "bingo addict" and was never home because of playing bingo. Person 05 stated that her mother played bingo all afternoon and all evening. She viewed her mother as neglectful and accused her of being neglectful in the welfare office.

Person 05 described her mother's relationship with her step-father as "OK - Not the greatest and not the worst". They separated two years ago due to his drinking and they had been apart for seven months. She stated that since the age of 13 she had fought more with her step-father and that they ignored each other. She stated that she had never been able to talk to her mother. She felt that she got along with her other family members but that she would not have described her family as close because "nobody talks".

Even though person 05 reported that she had three close friendships, she indicated that she would have kept boyfriend and family problems to herself, and that she preferred to deal with problems on her own. She indicated that there were individuals both inside and outside her family that she could have gone to for support but that she would have only turned to them under certain circumstances.

In terms of her future, she indicated that she did not think about the future. She would have liked to have gone back to school but she did not see herself having an education. She stated that in terms of her employment opportunities she had been unable to find work, and that she worried about working and then getting laid off or fired. In terms of the changes she would have liked to have made in her life, she would have liked to have worked things out with her step-dad as he did not see her "as his kid but he does the other kids".

Person 05 indicated that she had thought about suicide for approximately one week prior to taking the drug overdose, but that she had not determined a method. During that week she had been fighting with her boyfriend and it looked as though the relationship was in jeopardy. She also had been fighting with her mother. The night before she took the overdose she had a fight on the phone with her boyfriend. She reported that she did not sleep that night and that the next morning she took the drug overdose after a deliberation of approximately two hours.

Person 29 was 15 years of age and the youngest in a family of two children. Person 29's mother left her father when she was one year of age because he was physically abusive. Her mother was in a common-law relationship for approximately six years until person 29 was 12 years of age. She described him as a "jerk", and she stated that he was heavily into drugs. Her father had brain damage which occurred after the divorce. She stated that he was an alcoholic and that he hit her when she visited him. Person 29 did not appear to have any limits set for her as, for example, she was out until 4:00 in the morning the night before the interview. She stated that her mother went along with what she wanted and that she gave her and her sister their freedom. The family also had financial problems as person 29 indicated that there was not enough money to pay all the bills, and that often there was no food in the house. They had changed residences many times.

Person 29 did not achieve very good grades and she skipped classes. She had also repeated two grades. She dropped out of school in Grade 8 but the Truant Officer made her go back . She reported that since the age of 13 she had been a very heavy drinker, but that she had recently quit drinking because the alcohol was making her sick. At the time of the interview she reported taking drugs 3 to 5 times per week. She had also been caught shop-lifting, and had recently become involved in Satanism.

Person 29 described her parents' relationship as friendly, and her relationship with her mother as "good" in that her mother understood her. She described her relationship with her father as "we can talk but only occasionally". She stated that her sister was like a best friend. She did not feel her family was close because her mom and sister did not get along, and she did not get along with her father. She perceived her family as communicating openly with each other as they always talked and told each other their problems. However, she stated that family members resolved arguments by not talking to each other "until we get over it".

Person 29 stated that if she needed help from someone she would have gone to a friend. However, when she was asked if there was someone outside her family she could have gone to for support she responded "no" as she felt her friends "wouldn't really help". She also stated that she would have preferred to deal with problems on her own as she would not have wanted to get anyone else involved. She felt she could have gone to her mother for support under some circumstances.

When asked what she saw for the future she responded, "doing the same things I do now". She stated that her goal was to graduate from college. She would also have liked to have changed the way she lived in terms of having a bigger house and nicer clothes.

V. PROPOSED MODEL OF SOCIAL INFORMATION PROCESSING

The purpose of the present chapter is to present a model that can be used to explain the choice of a suicidal behavior. Based on an integration of the research literature an initial social information-processing model was developed. Information gained from the interviews was then used to modify the original model. Processes involving encoding and later retrieving information from memory play a central role in the model, and schema theory (e.g., Taylor & Crocker, 1981) provides a useful framework for explaining these cognitive processes. The chapter begins with an overview of schema theory and then continues with the proposed model of social information processing.

A. Overview of Schema Theory

In the middle of the last decade there was a turn from the model of rational, scientific man toward the current Zeitgeist of social cognition where man is viewed as cognitively limited and subject to distortions (Bargh, 1984). Schema theory (e.g., Taylor & Crocker, 1981) provides an explanation of how individuals process the plethora of information that is encountered in daily living within the constraints of this limited cognitive system

Cognitive schema theory developed in response to the observation that "it is difficult to understand and remember things without drawing on abstracted general knowledge about how the world works and filling in where information is missing or ambiguous" (Fiske & Taylor, 1984, p. 144) That is, data do not seem to have meaning unless they fit into a cognitive context.

According to schema theory, all knowledge is packaged into units. These units are called schemata. Schemata can be conceptualized as integrated "packets" of information that can be used to construct an organized internal representation of aspects of a world (Holyoak & Gordon, 1984; Rumelhart, 1984; Taylor & Crocker, 1981).

Schemata are the skeletons around which information is interpreted, and they are considered the fundamental elements upon which all information processing depends. While categorization processes explain how a label is applied to a stimulus, schematic processes explain what effects the label can have on subsequent information processing. Schemata are the mechanisms that guide selective attention and perception. They are involved in interpreting data, in retrieving information from memory, in determining goals and subgoals, in the allocation of resources, and in guiding the processing in the system (Ingram & Hollon, 1986; Rumelhart, 1984).

According to this theory, information is stored in an abstract form and is not simply a collection of all the original encounters (Fiske & Taylor, 1984). Thus, for example, an "airplane pilot" schema is stored in memory as a general case which has been abstracted from many encounters (personal or vicarious) with specific pilots. The information from the original encounters may not be stored in memory. If an individual encounters someone that she classifies as a "pilot", she will likely make certain assumptions about that individual that are based not only on the present data, but are derived from her schema of pilots.

An acculturated member of any society will have a large number of schemata stored in long-term memory (Hastie, 1987). Since there are a number of schemata, cognitive functioning is guided only by those schemata that are activated at any given time (Ingram & Hollon, 1986; Rumelhart, 1984). When a schema is activated by an event, the schema functions as a scaffold for the encoding and organization of information (Hastie, 1987). The subsequent activation of the schema may serve as a retrieval cue for the information, thereby facilitating recall (Bodenhausen & Wyer, 1987).

A schema can be viewed as an abstract description which has a set of "slots" to be filled by variables. For example, a "school" schema might have the slots "principal", "classrooms", "teachers", "students", etc. When an assignment of a variable in a schema has been made, the schema is said to have been "instantiated" and is used for interpreting the incoming information (Rumelhart, 1984). Using the previous example, if I assign the variable "teacher", I might activate a "school" schema and use it to interpret the remainder of the incoming information. What becomes stored in memory is the instantiated schema. During recall, generic schema information may be used to further interpret and reconstruct the memory (Holyoak & Gordon, 1984; Wyer & Gordon, 1984). When we encounter a new situation for which no schema exists, a new schema would be created by analogy with existing schemata. Therefore, we would tend to view new situations as variations of old ones (Rumelhart, 1984).

Schemata can be embedded within one another. These embedded schemata are called sub-schemata. For example, the schema "classroom" could be a sub-schema in a "school" schema. A schema is said to have been activated from the "bottom-up" whenever an activated sub-schema causes various schemata of which it is a part to become activated. Conceptually driven activation occurs when a schema is activated and it in turn activates the sub-schemata (Rumelhart, 1984).

The following are four types of schemata often employed in social situations: person schemata, self schemata, role schemata and event schemata. Person schemata include prototypic conceptions, such as introvert or extravert, and they include person impressions for representations of specific individuals. Self-schemata contain information about oneself including personality, appearance and behavior characteristics. Role schemata include schemata for occupations, social roles, and stereotypic conceptions of social groups. Event schemata include shared understandings of what typically happens on certain occasions such as restaurant visits, business meetings, birthday parties, etc. (Fiske & Taylor, 1984; Taylor & Crocker, 1981).

In summary, given a stimulus cue from the environment, it would be prohibitive to match it against all prior experiences. Schemata enable the individual to identify stimuli quickly, fill in missing information, and to select a strategy for obtaining additional information, solving a problem or reaching a goal (Taylor & Crocker, 1981).

B. Proposed Social Information-Processing Model

In the remainder of the chapter the phases of the proposed model are discussed within the context of the suicidal literature and the data from the present study. Figure 4 presents the model.

Precipitating Event

The starting point for the model of social information processing is a precipitating or stimulus event. This event can be any cue that sets the problem-solving process in motion. The event does not have to be an action, but could be a thought or feeling. For example, attending to a depressed mood could be the cue that precipitates a problem situation.

In problem-solving situations, as with all situations, people rarely attend to all available information, or access all possible information from memory. The precipitating or stimulus event can automatically activate a related schema, or schemata can be consciously activated. Activated schemata will direct the search of the environment for needed information. Schemata serve to guide the attentional, processing, and retrieval phases. Wyer and Gordon (1984) stated that when individuals are called upon to comprehend information and/or to make a judgment, they are likely to retrieve and use only that concept or knowledge structure (schema)

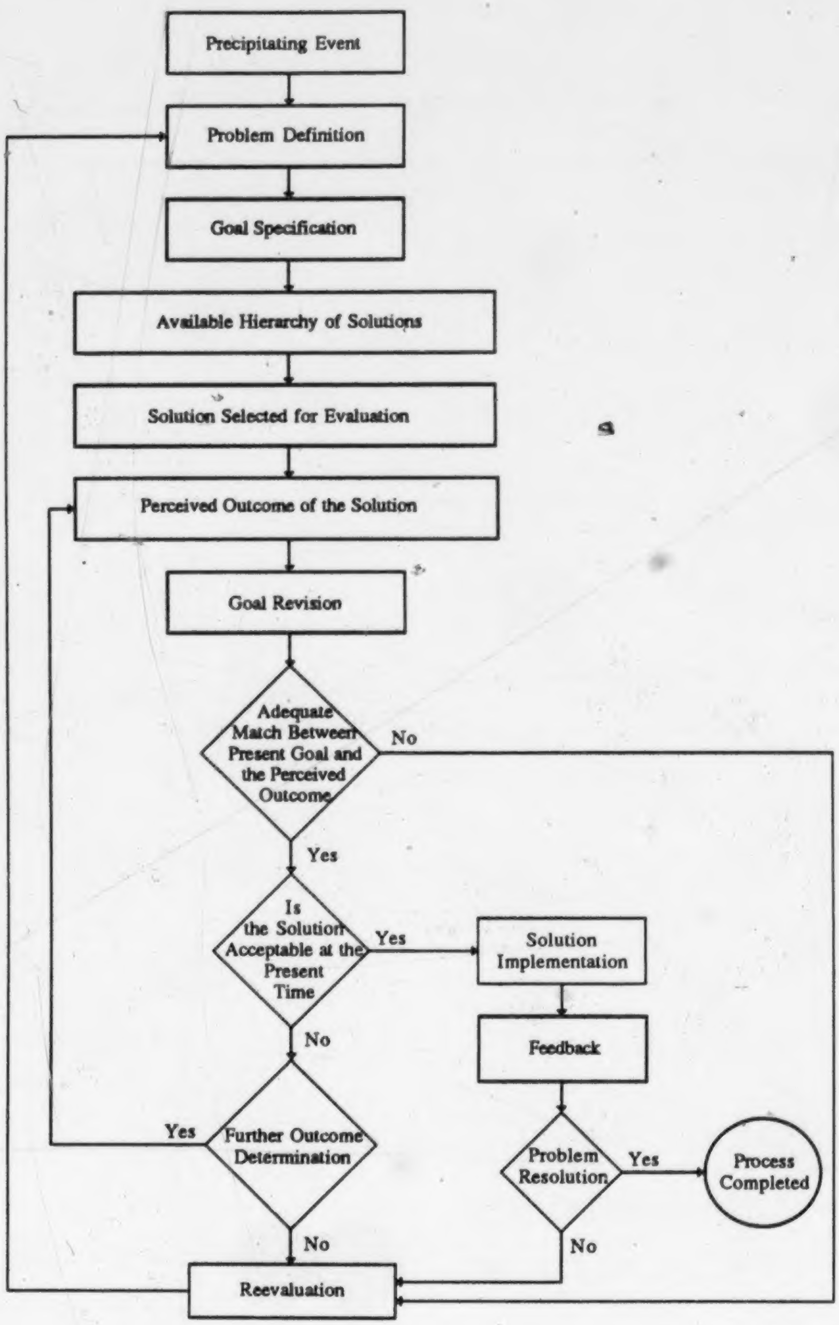
Precipitating Event
Problem Definition
Goal Specification
Available Hierarchy of Solutions
Solution Selected for Evaluation
Perceived Outcome of the Solution
Goal Revision
Adequate Match Between Present Goal and the Perceived Outcome
No
Yes
Is the Solution Acceptable at the Present Time
Yes
Solution Implementation
No
Feedback
Yes
Further Outcome Determination
Problem Resolution
Yes
Process Completed
No
No
Reevaluation

Figure 4. Proposed Social Information-Processing Model that is most easily available in memory, and they may ignore other information that may be equally or more relevant. Certain pieces of information may be attended to and retrieved from a schema over other information that may have been more relevant or useful in the situation, but is not part of the schema (cf. Bargh, 1984; Brewer & Nakamura, 1984; Rumelhart, 1984).

Therefore, how the stimulus is perceived will influence the direction of the problem-solving process through activating certain schemata at the expense of others. At any point in the process new schemata or subschemata may be activated as other cues make them accessible. Skill deficits such as failing to interpret the cues accurately, failing to utilize these cues, and/or biases in processing (i.e., attending only to negative cues) increases the probability that the individual will behave in what some people might consider to be an incompetent, deviant and/or inappropriate manner (Dodge, 1986).

In the case of parasuicide, most frequently the stimulus or precipitating event is interpersonal in nature (Adam et al., 1978; Bancroft, Skrimshire, Casson, Harvard-Watts, & Reynolds, 1977; Fieldsend & Lowenstein, 1981). For adolescents, the precipitating event usually involves a quarrel with a parent(s) or boyfriend/girlfriend (Grueling & DeBlassie, 1980; Hawton, O'Grady, Osborn & Cole, 1982; Otto, 1972; Spirito et al., 1989; Tishler, 1982).

The data from the present study are congruent with the findings reported in the research literature. Table 5 outlines the precipitating event for each of the ten individuals in the parasuicide group. As can be seen, in all cases the precipitating event was either a fight with a significant male, and/or a fight with a parent. As the literature and the data from the present study indicate that a fight or quarrel is the most frequently reported precipitating event to a "suicide attempt", one could hypothesize that when an individual is in the crisis situation she has activated a

Table 5

Stimulus Event that Precipitated the Drug Overdose

Person	Event
01	Fight with Mother
02	Fight with Boyfriend
03	Fight with Boyfriend
04	Fight with Boyfriend
05	Fight with Boyfriend
06	Fight with Boyfriend
07	Fight with Mother
08	Fight with a Significant Male
09	Fight with Boyfriend
10	Fight with Mother and Significant Male

"fight" schema or script (Abelson, 1981; Schank & Abelson, 1977) from which she processes information.

An event schema or script is a "mental representation of a type of situation, abstracted from many encounters with it, that preserves its recurring features and the temporal order in which they occur" (Bargh, 1984, p. 331). Early components in a script allow or cause later ones, and they often contain the intentions or goals of an actor (Anderson & Godfrey, 1987). Scripts can be acquired through participation or observation (Nelson, 1981).

In the literature, discussions of scripts tend to focus on social events such as eating in a restaurant. One, however, could extend this to other events. As stated previously, individuals could have a "fight" script, developed from many encounters with "fight" situations, which would vary across individuals in terms of the possible values of the variables, including possible responses. A post hoc attempt to recreate the sequence of events that could be involved in a fight script was carried out through examining the responses the individuals in the present study provided to one of the stories from the Means-Ends Problem Solving (MEPS) Procedure. Given the beginning and ending of a story, the MEPS requires the individual to make up the middle of the story. The story that most lent itself to providing the sequence of events involved in a fight script required that the individuals make up the middle component of a story that began with a person's boyfriend leaving following an argument and ending with "everything being fine between them"[1]. From examining the responses it was possible to derive a generalized fight sequence based upon the constraint of the story given; that is, the fight was to be resolved. The fight script derived from this story is as follows:

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[1] Unfortunately, the script derived from this story will be a variation of the script activated by the individuals in the crisis situation, as in the MEPS scenario the ending involved a resolution between the actors. In contrast, the individuals from the present study found that even after repeated attempts they were unable to resolve the difficulty. Therefore, they probably would have activated another component of the script sequence that involved ways of dealing with obstacles. This variation of the fight script can not be derived from the MEPS story.

1. MEPS beginning. H. loved her boyfriend very much, but they had many arguments. One day he left her. H. wanted things to be better.

2. The expression of emotions - e.g., crying

3. Contemplation of the problem and/or the relationship either on own or with the help of others. - e.g., a friend or counsellor

4 A decision is made regarding a course of action or goal. - e.g., to discuss the problem with him; to change oneself; to change the relationship.

5. Contact is made between the individuals. - e.g., she contacts him; he contacts her; a third party arranges contact.

6. A compromise/solution is reached. - e.g., she apologizes; they decide to change the relationship; they decide to get counseling.

7. MEPS ending - Everything is fine between them.

The above illustrates how the activation of a script could provide an individual with a scaffold for the unfolding of the remaining sequence of events. In a future study, it would be interesting to determine what the components of a fight script would be if individuals were asked to provide the sequence of events in a fight situation with no constraints given. Respondents could be probed as to the possible default values of the stages, such as the possible courses of action that could be chosen to resolve the conflict, or the solutions an individual would have available if the fight situation could not be resolved.

In summary, the precipitating or stimulus event will result in the activation of certain schemata. This will influence how the incoming information is encoded, and will influence the direction of the possible responses, as only information available from activated schemata would be used in the problem-solving process. Thus, more relevant information may not be considered and acted upon if it is not included in the activated schemata.

Problem Definition and Goal Specification

Before a problem-solving process is initiated, there must be the recognition that a problem exists. As previously stated, the stimulus interpretation from the previous stage will influence how the problem is defined. The problem definition may change during the problem-solving process, as other factors become salient, but the current problem definition will direct how the process proceeds at any point in time.

It is hypothesized that when problem solving culminates with the choice of a suicidal behavior, during the course of the problem solving an underlying issue may be triggered. An underlying issue is defined as a problem area that is currently causing tension in the individual's life. The activation of this issue could result in the individual redefining the problem with subsequent influences on the problem-solving process. For example, person 04's fight with her boyfriend could have resulted in a redefinition of the problem from "he does not understand how upset I am", to "I do not have a safe place to live". The redefinition of the problem could have resulted in new schemata being activated.

For the present study, it is hypothesized that a change in the problem definition, due to the triggering of an underlying issue, occurred for the majority of individuals somewhere between the time of the precipitating event and the decision to take the drug overdose. Table 6 presents the underlying issues hypothesized to have been triggered during the problem-solving process.

Once a problem has been identified, the goal of the problem-solving process is specified. According to Rubin and Krasnor (1986), a goal is a representation of the end state of the problem-solving process. They stated that a goal may be broken

Table 6

Underlying Issues Believed to Have Been Triggered During the Problem-Solving Process

Person	Underlying Issue
01	Powerlessness in Parental Relationship
02	Unresolved Grief Issues
03	Unresolved Familial Issues
04	Safety Issues; Unresolved Familial Issues
05	Unresolved Familial Issues
06	Independence Issues
07	Powerlessness in Parental Relationship
08	None
09	Unresolved Familial Issues
10	Minor Independence Issues

into subgoals, or that it may change during the process, but the goal "in force" at a particular time provides the basis for outcome feedback. If the schema activated has a "goal" as one of its variables, then the person's goals may be restricted by the values of the variable. For example, in a fight script the goal variable may include the following values: "to make up", "to make him hurt", "to make him want me", and "to make him understand me". "The goal schema one brings to mind determines what information is relevant and consistent" (Fiske & Taylor, 1984, p. 150). Once a goal is selected, it can activate other subschemata which might include means for obtaining that goal.

In terms of suicidal behaviors, the goal has been found to vary according to the type and lethality of the behavior. Whereas with highly lethal behaviors the goal is often death related, several authors have reported on the large proportion of people who attempt suicide without intending death (Bancroft, Hawton, Simkin, Kingston, Cumming, & Whitwell, 1979; Kessel, 1965; Morgan, 1979; Smith, 1972; Stanley, 1969).

If some individuals make suicide attempts with little intention to die, what do they hope to gain by this behavior? According to Griffin and Felsenthal (1983), the intent of suicidal behaviors is almost always to send a message to another person. Adler recognizing this factor added the concept of the "opponent in the game" (Gegenspieler), the person to whom the suicidal behavior is directed[2] (Ansbacher, 1969). Suicidal behavior, then, could be viewed as a form of communication (Bonnar & McGee, 1977).

Adolescents also seem to share the researchers' view that many suicide attempts are not death intended. Curran (1983) asked adolescents aged 15 - 19 to choose the reasons they felt teenagers sometimes make "unsuccessful" suicide attempts from a list of possible reasons. He found that regardless of the sex of the respondents, or their prior experience with attempted suicide, these adolescents considered the response "seek help or attention" to be the most likely reason for an "unsuccessful" attempt by a teenager. They also viewed the lethality of the behavior to be relatively low. Domino et al. (1980) reported similar findings. They found that the majority of a sample of college students endorsed the notion that suicide attempts are not designed to terminate one's life, but instead are meant to convey a plea for assistance.

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[2] Because of the high proportion of "suicide attempters" who do not intend to die, many suicide attempts have been labelled manipulative. Some authors (e.g., Henderson et al., 1977; Kreitman, 1979) feel that the word manipulative is too pejorative and that the term operant should be used instead. Kreitman (1979) stated that most human activity is transacted in an interpersonal setting and is concerned with influencing the attitudes and behavior of others.

The comparison group in the present study was asked to indicate from a list of possible reasons the ones that they felt were likely or unlikely reasons for someone to attempt suicide. The list was adapted from a list used by Hawton, Cole, O'Grady and Osborn (1982) with adolescents who had intentionally overdosed on drugs. The individuals were asked to respond using a 7-point Likert-Type scale where 1="unlikely" and 7="likely". Table 7 presents their responses to this list.

The responses of the comparison group indicated that they saw a number of reasons someone might attempt suicide, including interpersonal communication, escape, and a wish to die. The finding that the majority of the respondents indicated a death wish as a likely reason for someone to "attempt suicide" is incongruent with the findings of Curran (1983) reported earlier. One reason for this discrepancy could be that Curran asked for the reasons someone might make an "unsuccessful" suicide attempt, whereas in the present research the participants were asked the reasons someone would attempt suicide.

Only a few researchers have directed their efforts toward eliciting motivational information from individuals who have exhibited suicidal behaviors. Hawton, Cole, O'Grady, and Osborn (1982) asked fifty adolescent self-poisoners to account for their overdoses by choosing reasons from a prepared list. The reasons most frequently

Table 7

Comparison Group's Reasons Someone Would Attempt Suicide

Reason	Person										Median
	20	21	22	23	24	25	26	27	28	29	
To influence someone	7	2	7	7	6	7	3	6	4	5	6
Seek help or attention	2	5	7	7	7	6	6	4	6	5	6
Get relief from an impossible state of mind	4	7	6	7	5	6	3	6	7	4	6
They are in an unbearable situation and do not know what else to do	7	7	2	7	6	6	3	4	6	5	6
They want to die	6	6	7	1	2	7	7	1	6	5	6
Escape from an impossible situation	6	7	2	7	7	5	5	5	6	5	5.5
To make people see how bad they are feeling	6	6	7	5	6	5	4	5	5	6	5.5
To make some other person feel sorry	4	5	7	5	5	6	3	6	6	6	5.5
To find out if they are loved by someone	5	6	2	7	3	6	4	4	5	6	5
They just lose control and had no idea what they are doing	5	3	1	2	3	7	5	2	7	5	4
To frighten someone	2	6	3	5	4	4	3	6	3	5	4
To show how much they love someone	3	1	7	4	2	6	2	1	2	3	2.5
To make things easier for others	4	1	1	1	3	7	1	6	2	2	2

Note: 1=unlikely reason 7=likely reason.

selected suggested that the overdose was viewed as a means of obtaining relief from a stressful state of mind or situation, and as a means of showing other people how desperate they were feeling. The clinical staff who assessed their motives suggested that the adolescents also took the overdoses to get back at other people or to change others' behaviors. They felt that these individuals were rarely concerned with getting help from an outside agency.

In the present study, the motivation behind the individuals in the parasuicide group taking the drug overdose was elicited by asking them to indicate their reasons from the same list used by Hawton, Cole, O'Grady, and Osborn (1982) in the above mentioned research. The individuals were asked to respond using a 7-point Likert-Type scale where 1="did not at all influence me" and 7="totally influenced me". Table 8 presents their responses to this list[3].

These results are congruent with Hawton, Cole, O'Grady, and Osborn's (1982) findings, in that in almost all of the cases some aspect of escaping from an impossible situation or stressful state of mind was indicated, in conjunction with an aspect of interpersonal communication. This is also consistent with Diekstra's (1989b) position that many suicide attempts are motivated by a combination of interruption (to interrupt conscious experience for a while) and appeal (to mobilize or change others).

The desire to escape does seem to be an important component of low lethality suicidal behavior. This is supported by the research findings of Parker (1981). He compared low and high suicide intent groups (mean age 21) and found that the low intent group almost exclusively saw taking an overdose as a desperate escape from

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[3] The responses from the parasuicide group may not be completely indicative of the true motivation behind the behavior as, for example, person 03 indicated after filling out this section of the questionnaire that looking back at her behavior she did want to show how much she loved someone, and wanted to make people see how bad she was feeling. As well, for person 07, the information obtained during the rest of the interview clearly indicated interpersonal communication as a goal of the overdose.

Table 8

Parasuicide Group's Reasons for Taking the Drug Overdose

Reason	Person										Median
	01	02	03	04	05	06	07	08	09	10	
You wanted to die	7	7	6	4	7	7	7	5	7	7	7
Escape from an impossible situation	7	5	7	7	7	6	2	7	7	6	7
Get relief from an impossible state of mind	6	6	7	3	6	6	1	7	7	6	6
You were in an unbearable situation and did not know what else to do	7	3	7	5	2	7	1	7	2	6	5.5
You just lost control and had no idea what you were doing	4	7	7	5	1	3	1	1	7	7	4.5
To make things easier for others	3	1	1	2	6	5	5	7	1	7	4
To make people see how bad you were feeling	1	2	3	2	4	1	2	6	7	5	2.5
To find out if you were loved by someone	2	1	2	3	5	1	2	6	5	6	2.5
To show how much you loved someone	2	7	1	2	7	1	1	5	7	1	2
To influence someone	4	1	2	6	1	1	2	5	5	2	2
Seek help or attention	1	1	2	2	2	2	1	4	2	4	2
To make some other person feel sorry	1	1	1	2	1	1	1	3	2	2	1
To frighten someone	1	1	1	1	1	1	1	2	2	1	1

Note: 1=did not at all influence me 7=totally influenced me.

tension. Whereas the high intent group perceived "an overdose" and "suicide" in similar terms, the low intention group rated "an overdose" as second only to "getting drunk" in terms of its perceived easiness of action. In fact, other possible solutions such as "seeking professional help" or "talking the problem over with the key person" were perceived as very much less easy. Parker stated that "perhaps the most striking finding is the more or less exclusive escape or 'respite' function that an overdose has for the low intent groups, and which for them places the element overdose in construct space close to 'getting drunk' and 'crying alone'" (p. 312).

It is interesting to note that in most of the cases the individuals within the parasuicide group also clearly identified the wish to die as a reason for taking the drug overdose. The information obtained from the interviews would indicate that for most of the individuals this was not the case. For others though, it is believed that immediately preceding the overdose, for a fleeting moment, they did want to die but then changed their minds after they had taken the overdose. Hawton (1982) stated that "adolescent self-poisoners may feel so distressed at the time of taking the overdose that they feel *as if* they want to die, but death is not the (unconsciously) intended outcome of the act" (p. 94). Olin (1978) postulated that the nonpsychotic person in the presuicidal state may be suffering from impaired reality testing in which suicide becomes a way of dying without terminal death.

Other researchers have also reported a discrepancy between individuals' reports of whether they wanted to die at the time of a suicide attempt and clinical assessments of their motivation. Hawton, Cole, O'Grady and Osborn. (1982) reported that 17 of the 50 adolescents they sampled indicated that they wanted to die at the time of taking the overdose. Clinical assessors disagreed by judging only 5 of those 17 with wanting death. Adam et al. (1978) examined 195 individuals of all ages who had "attempted suicide". Sixty-five percent of the individuals reported that they had wanted to die at the time of the attempt, but external ratings indicated that the primary aim was death in only 13% of the cases. Hawton (1982) stated that often suicidal intention is claimed by the adolescent because it provides the only reason that seems credible or legitimate to the individual.

In summary, the goal of the problem-solving process will limit the possible solutions to a problem. If the goal of the process is death, then attempting suicide would be an obvious possible response. However, if the person does not view death as a goal, then her perceptions regarding the outcome of attempting suicide are much more important when the final choice is made. This will be discussed in more detail in a subsequent section.

Available Hierarchy of Solutions

The next stage involves accessing a hierarchy of solutions for approaching the problem. The major assumption of this model is that "in any environmental setting the potential responses an individual may make have a different probability of occurring and can be ranked in terms of this probability" (Hall & Lindzey, 1970, p. 431-432). When one approaches a problem situation, one comes with a repertoire of possible responses that have some vague probabilities of occurring in the novel situation. These strategies are stored in long-term memory and one or more of these strategies may be brought into short-term memory for evaluation or implementation.

It is hypothesized that different schemata will have different hierarchies of solutions. The solutions contained in these hierarchies can be overlapping, as well they can contain unique solutions. The activation of specific schemata results in only those hierarchies being available. Other solutions that might have been more appropriate, but that are contained in hierarchies in unactivated schemata, may not be available. The type and number of schemata activated, therefore, may limit the solutions that are available to consider.

Rubin and Krasnor (1986) stated that strategy retrieval may be relatively automatic, or it may be conscious and deliberate. In both cases the strategies must already exist in the individual's repertoire, though new strategies may be constructed by the individual through the transformation of available strategies. In situations that are not novel, the first responses will probably be relatively automatic in nature and will reflect how the individual tends to respond in similar situations. The probability of any one response occurring will be dependent on what responses have been learned (directly or vicariously) to be successful in previous situations. The availability and positioning of the response in specific hierarchies, therefore, is affected by an individual's social learning history. As stated earlier, if an individual comes from a background in which effective means of solving problems are not taught, and in addition her parents and/or peers model ineffective coping patterns, in stressful situations this ill-prepared individual would be less likely to have available many appropriate means of achieving her goals.

Originally, the extent of an individual's response hierarchy was to be estimated with the Optional Thinking Test (OT). As stated in chapter III, the OT is a measure of the capacity to conceptualize alternative solutions to a problem. Individuals were asked what they would do in the following four fictitious situations: how to have a turn watching t.v., getting someone to listen to you, getting a friend to go to the movies, and what to do so that your husband would not be mad after you broke his favorite flower pot. Table 9 presents the individuals' scores on the four stories as well as their mean scores. The comparison group provided more options to the dilemmas than the parasuicide group, though this was not statistically significant. It is possible that the motivational level of the individuals could be a factor in explaining the tendency for the parasuicide group to generate fewer responses, as this was one of the first tests to be given. As stated in chapter III, these individuals

Table 9

Scores on the Optional Thinking Test

Person	Problem1	Problem2	Problem3	Problem4	Mean
01	2	2	3	3	2.50
02	3	2	3	4	3.00
03	3	2	2	1	2.00
04	2	0	3	1	1.50
05	1	1	2	2	1.50
06	1	0	2	3	1.50
07	2	2	2	3	2.25
08	2	1	1	3	1.75
09	3	3	2	4	3.00
10	2	1	2	2	1.75
20	2	2	2	3	2.25
21	4	1	2	3	2.50
22	2	1	2	3	2.00
23	3	1	2	3	2.25
24	2	1	3	3	2.25
25	3	1	3	2	2.25
26	3	2	3	3	2.75
27	4	3	2	5	3.50
28	2	3	3	4	3.00
29	2	2	3	4	2.75

$\overline{X}_1$ = 2.075 $\overline{X}_2$ = 2.55
s.d. = .590   s.d. = .453

t=-2.02 n.s.

might have been more interested in talking about their personal situations and, therefore, wanted to complete this exercise as quickly as possible.

From the perspective of schema theory, the OT would not provide an overall indication of the extensiveness of an individual's response hierarchy unless one was interested in the specific schemata activated by the test. One could hypothesize that if an individual had a large hierarchy in one schema then she would be more likely to have a large hierarchy in her other schemata. However, this does not seem to be the case. From examining the responses from the OT one can see that an individual might only come up with one response on one story but four responses on another story.

In summary, at any given moment an individual only has available those responses included in hierarchies within activated schemata. Responses that are contained in other hierarchies within unactivated schemata are unaccessible. For example, if an individual has accessed a "fight" schema, there will be certain responses contained in the hierarchy within that schema. If she accessed a different schema she might have available other responses that might be more appropriate.

The Positioning of "Attempt Suicide" in a Response Hierarchy

In terms of the response "attempt suicide", a suicidal behavior cannot be chosen if it is not included in an individual's response hierarchy. The social learning model has been proposed by several authors to explain how the option of a suicidal behavior becomes included in a hierarchy of solutions (e.g., Bostock & Williams, 1974; 1975; de Catanzaro, 1981; Diekstra, 1974, 1982a; Frederick & Resnik, 1971; Lester, 1987; Sale et al., 1975). The component of social learning theory that has been emphasized is modeling (Bandura, 1977b). Modeling refers to the acquisition of behavioral responses through observation. Whether modeling behavior will take place depends in part on such factors as the age, sex, and social status of the model;

and the degree to which the observed behavior is reinforced. The effect of learning from symbolic models increases with an increase in similarity between model and observer characteristics (Bandura, 1977b).

Proponents of the effects of modeling on suicidal behaviors argue that suicidal behaviors, as with other coping behaviors, can be imitated and thus become a possible response to a difficult situation (e.g., Davis, 1983; de Catanzaro, 1981; Garfinkel, et al., 1982; Griffin & Felsenthal, 1983; Ray & Johnson, 1983; Rosenblatt, 1982; Teicher, 1979; Tishler, McKenry & Morgan, 1981). In fact, "the best predictor of future suicidal behavior appears to be a learning-history of similar behavior (previous suicidal behavior by self or models) as a response to problems" (Diekstra, 1985, p. 31). Therefore, the occurrence of suicidal behavior will depend upon the extent to which an individual has "learned to act suicidally" in unfavorable circumstances.

The literature on modeling and suicidal behavior can be divided into research that has examined the effect of models portrayed in the media on subsequent suicidal behavior, and research that has examined the effect of personal experience with suicidal behaviors on subsequent suicidal behaviors. The literature is summarized below.

Suicidal Models in the Media

A debate regarding the effect of the representation and reporting of suicidal behaviors in the mass media, the "Werther effect", has occurred over the past 20 years (e.g., Barraclough, Shepherd, & Jennings, 1977; Blumenthal & Bergner, 1973; Bollen & Phillips, 1982; Gould & Shaffer, 1986; Hafner & Schmidtke, 1989; Littmann, 1985; Phillips, 1974, 1979; Phillips & Carstensen, 1986; Phillips, Carstensen & Paight, 1989; Platt, 1989b). The overall conclusion is that the mass media have a substantial effect on suicidal behaviors among persons who resemble the suicidal model in terms of sex and age (Maris, 1989). Hafner and Schmidtke (1989) stated that "the reporting (and especially over-reporting) of suicide-related issues and fictitious suicidal modeling behavior may lead to the view that this form of behavior is 'a common and understandable way' of problem solving . . . thus increasing the likelihood of a person choosing suicidal behavior as a problem-solving strategy in a stress situation" (p. 324).

Platt (1989b) reported the first study to examine the relationship between the media presenting a fictional soap opera character ingesting an intentional drug overdose and the subsequent rate of parasuicide. He reported a significant increase in overdose admissions in women over a 7-day period. He cautioned that these findings do not lend unequivocal support to the imitation theory as other hypotheses did not hold.

One failing with many of these studies is the short length of time assumed for the imitation effect to diminish, usually less than a 2-week interval. While Bollen and Phillips (1982) suggested that the effect of watching televised models probably does not extend beyond ten days, Hafner and Schmidtke (1989) found an effect up to 16 weeks for individuals who were most similar to the televised models. If an model has had an impact on someone, there is no reason why the right cue could not bring the model to memory after many years. For example, Lester (1987) reported a case study of an athlete who committed suicide nine years after the suicide of Marilyn Monroe. The athlete reported that he was stimulated to thoughts of suicide by the suicide of Ms. Monroe.

Personal Experience with Suicidal Models

As well as models in the media having an impact on suicidal behaviors, models within one's social network can also present suicidal behaviors as a possible solution to a difficult situation. This position is supported by the finding that a suicide in the family increases the likelihood of other members in the family exhibiting suicidal behaviors by at least eight times, as compared to those with no family history (Garfinkel et al., 1982). According to Rosenblatt (1982), prior suicidal behavior of a family member increases the likelihood of a child in the family becoming suicidal because the behavior becomes a learning model for the adolescent who is searching for ways to deal with problems. Tishler et al. (1981) proposed that prior suicidal behavior can serve as a model and offer cognitively immature adolescents a readily available solution to one's problems.

Kreitman, Smith, and Tan (1970) also provided support for a modeling effect. They compared the rates of attempted suicide for the family and intimate friends of a series of people who had attempted suicide to the population at large. They found four times the expected number of attempted suicides among the study group. The effect was most apparent in the young self-poisoning females. This finding may partially explain why young females account for the greatest increase in self-poisoning (Morgan, 1979), as these individuals might be more influenced by the suicidal behaviors of others within their social network.

The possibility that young females may be more vulnerable to a modeling effect is supported by a study that examined the families of suicidal and non-suicidal adolescents (McKenry et al., 1982; Tishler & McKenry, 1982; Triolo et al., 1984). The researchers found that the adolescents' perceived relationship with their mother was much more predictive of female attempts than male attempts (Triolo et al., 1984). Upon examining the characteristics of the attempters' mothers, it was found that they had a greater incidence of prior suicidal behavior as compared to the non-attempters' mothers[4] (McKenry et al., 1982).

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[4] The fathers of the attempters, though, were found to be more depressed and to have lower self-esteem scores than the fathers of the non-attempters (Tishler & McKenry, 1982). One could hypothesize from the above findings that for some adolescent females with mothers who have demonstrated suicidal behaviors or ideation, there might be a tendency to model this behavior, especially if the mother has become the sole role model as either the father is absent from the home or is ineffectual. This could explain, in part, why researchers have found that there is a tendency for suicidal individuals to come from a home where the father has been absent. It might not be so much the turmoil caused by the absent father, but that a mother who has maladaptive coping skills becomes the sole role model.

The hypothesis that females might be more influenced by the suicidal behaviors of others was also supported by a study that examined the clustering of teenage suicides after the television broadcasting of news stories about suicide (Phillips & Carstensen, 1986). These authors found that within the teenage population, a clustering of suicides appeared more strongly among females than among males. In fact, they found that following television broadcasts of stories about suicide, suicides by female teenagers rose by over 13 percent, in contrast to an increase of just over 5 percent for males.

Individuals in the present study were asked if they remembered someone in their family or a friend ever threatening suicide, if they knew of anyone who had committed or attempted suicide, and if they remembered seeing on television or reading in a paper or a book about someone who had attempted or committed suicide. Table 10 summarizes their responses. As can be seen, everyone of the individuals, except for person 29, reported that they remembered an experience with suicidal behaviors, either through the media or personal experience. There does appear to be more experience with attempted suicide in the parasuicide group as 70% of the individuals reported personal experience with attempted suicide as compared to 40% of the individuals within the comparison group. The percentage of individuals within the comparison group reporting personal experience with attempted suicide is similar to the findings of Frigo, Dyck, and Wright (1989) who reported that 41.3% of 1751 junior high students and 46.0% of 939 high school students indicated that they knew someone who had attempted suicide.

There is also a difference between the parasuicide and comparison group in terms of the degree of the personal contact with attempted suicide. Four individuals from the parasuicide group (persons 03, 04, 07, 08) were actually involved in some aspect of a suicide attempt of a friend or family member, either through being present at the time or assisting afterwards, as compared to no one in the comparison group.

Table 10

Individuals' Experience with Suicidal Models

Suicidal Model Type	Parasuicide Group Person Number	Comparison Group Person Number
Media Models		
Completed Suicide	01 03 05 06 07 09 10	20 21 22 24 25 26 27
Attempted Suicide	02 06 09 10	23 28
Personal Experience		
Completed Suicide	01 03 05 06 09	21 26 28
Attempted Suicide	01 02 03 04 06 07 08	22 23 25 26
Suicide Threats	02 03 05 07 10	21 22 23 27 28

Persons 01 and 02 also reported that a close friend had attempted suicide, and that they saw their own behavior as similar to their friend's behavior.

As most people have encountered suicidal models, either through the media or through personal experience, how does one explain why some individuals seem to be more "susceptible" to modeling this behavior, especially young females. One contributing factor could be whether the behavior of the model has been extensively processed by the observer, as conscious processing is required for information to be stored in long-term memory (Bargh, 1984). The more extensive the processing, the more likely the information will be retained (Bodenhausen & Wyer, 1987). Behaviors are better remembered if they are unexpected (Hastie, Park & Weber, 1984), if they can be interpreted as instrumental to some objective of the actor (Wyer & Gordon, 1984), or if the person takes on an empathic, involved role or set (Hastie et al., 1984). Suicidal behaviors are usually unexpected and can be interpreted as instrumental. If a person observes this behavior with empathy as well, then she would be more likely to process the behavior more extensively.

One's conception of "self" during the course of receiving information also appears to be the best predictor of its influence (Wyer & Gordon, 1984). Thus, a person's recall of information about someone else may be cued by her recall of episodic information about her own behavior toward this person. In fact, a person may be better able to recall her own behavior or reactions in a given situation than the behavior or reactions of others. This is supported by a study reported by Wyer and Gordon (1984) that found that individuals tended to recall fewer details over time of a situation in which they had participated, but there was no evidence for a corresponding decrease in the recall of their own behavior. In terms of suicidal behaviors, a person's response to a suicidal behavior could influence whether she is likely or unlikely to model the behavior at a later date. In explaining the findings that modeling appears to influence young females more than young males and older individuals, one could hypothesize that young females might be more likely to empathize and/or sympathize with the model and, therefore, not be as critical of the behavior. As a consequence, they might process the event in more detail and remember their reactions of sympathy and concern rather then any negative outcomes the model might have experienced. This behavior, then, would be more accessible to them at a later date.

The hypothesis that females might be more likely to empathize or sympathize with individuals who engage in suicidal behaviors is supported by a study carried out by Stillion et al. (1984). These researchers asked 198 adolescents to rate whether they sympathized, empathized, or agreed with the action of the target figure in 10 vignettes describing different situations leading to attempted suicide. They found that adolescent females, as compared to adolescent males, reported significantly more sympathy toward the target figure.

In summary, the response of a suicidal behavior is acquired through social learning and has a differential place in an individual's "response tendency hierarchy" within individual schemata which a wide variety of conditions can invoke. It is hypothesized that in the case of parasuicide, often a "suicidal trigger" occurs which results in the retrieval of previous models who have engaged in suicidal behaviors. According to Hafner and Schmidtke (1989), a behavioral pattern learned from a model may remain latent for some time until reactivated by some stimulating events or motivating factors. In the case of parasuicide, this trigger could be, for example, the thought "I wish I was dead" or having a bottle of pills within view. To illustrate, person 09 indicated that if the bottle of Tylenol had not been on the table in front of her she would never had thought of attempting suicide. "It seems reasonable to suppose that observed event sequences, perhaps like verbal descriptions of behavior, are encoded into memory in terms of frames or chunks and that these frames, if recalled later on, serve as visual pointers to schemata that can be used to reconstruct details of the event sequence" (Wyer & Gordon, 1984, p. 105). This event sequence then provides the individual with an available response to consider. It is possible that in the case of person 09, the bottle of pills retrieved from memory a model from a soap opera where a young women took a drug overdose in response to a relationship problem. This solution, then, became very accessible.

Perceived Outcome and Goal Revision

Once a response is selected, it must be evaluated in terms of its perceived outcome. The perceived outcome will be based on prior learning experience. When the behavior is one that has never before been engaged in, the individual will be more likely to spend a greater amount of time deliberating the outcome. Once the outcome has been determined, the individual may revise her original goals to include some of the perceived benefits of the behavior that she had not previously considered, but that she deems to be desirable.

According to Diekstra (1985) we choose a behavior that we expect will result in the attainment of a goal either through its direct (necessary) or indirect (possible but not necessary) effects. The direct effects are those that will necessarily occur (i.e., a shot to the head will result in tissue damage), while the indirect effects are those that are possible but not necessary (i.e., the reactions of others to the behavior). Diekstra stated that the aim of suicide is not directed at self-destruction, but toward the attainment of goals important to the self, even though the attainment of such may involve a real or apparent threat to the physical existence.

Diekstra (1985) contended that one of the essential characteristics of suicidal behaviors is that the person expects only one act in her repertoire to be most effective in leading directly or indirectly to the attainment of the goal. The lethality of the behavior's outcome is related to the extent to which the direct or indirect effects of the suicidal behavior are expected to be effective. Therefore, if the expectancy of the effectiveness of the direct effects is very high, in terms of solving the problem, and the expectancy of the effectiveness of the indirect effects are very low, the probability is very high that the behavior will have a lethal outcome. On the other hand, if the expectancy of the direct effects is very low (i.e., none or minimal bodily damage), while the expectancy of the indirect effects is very high (i.e., reaction of others in the intended direction), then the probability that the behavior will have a nonfatal outcome will be very high. These expectancies are acquired through a social learning process. If in a given situation an individual has learned from previous suicidal behaviors, or from observation or communication, that a suicidal behavior will be the most effective in leading to a goal, the intention toward a suicidal behavior will be established in that situation, and a suicidal behavior will occur except when other alternatives are offered.

The perceived outcome of "attempting suicide" for the parasuicide group can be inferred from their stated motivation reported previously in Table 8, as one could assume these individuals would not have engaged in a behavior where the perceived outcome was not congruent with their motivation. As stated earlier, their motivation for taking the drug overdose involved escape and interpersonal communication factors.

In addition, the perceived outcome of "attempting suicide" for the individuals within the parasuicide group could be derived from their reports of the experiences of suicidal models. Following is a sampling of the comments made from some of the individuals regarding the outcomes of a suicidal behavior that they had observed:

- Person 03 indicated that she was very scared and supportive of her brother following his suicide attempt. She stated that he attempts suicide to get attention.

- Person 04 indicated that her uncle attempts suicide for attention and that the first few times he attempted suicide he received attention and support, but that finally people got sick of him.
- Person 07's brother-in-law threatened to commit suicide if her sister left him and "it worked - she stayed". Person 07 also had a friend who recently intentionally overdosed on drugs. He called her and she called an ambulance for him.
- Person 08 had a friend who had recently taken an intentional drug overdose. After he had taken the overdose he called her. She went to his house and took care of him by "taking his temperature and giving him milk".

These responses would indicate that they perceived the individuals, who had attempted suicide, receiving attention and concern from their social environment. Person 07 would also have learned that the behavior influenced someone in the intended direction.

The comparison group was asked what they thought the outcome of attempting suicide would be. Table 11 reports these findings. A comparison of what they perceived the outcome of attempted suicide to be with their previously specified reasons someone might attempt suicide, reported in Table 7, reveals that the reasons they believed someone might attempt suicide are different in some instances from their perceived outcome of attempted suicide. Specifically, even though they thought that someone might attempt suicide to escape from an impossible situation, to get relief from an impossible state of mind, and to influence someone, most of them did not perceive attempting suicide as resulting in these outcomes. It is interesting that person 29 had identified a number of reasons someone would attempt suicide, but she did not see the outcome of attempting suicide as fulfilling any of these goals, except where a person desired death. She was also the only individual who reported no experience with suicidal models.

Table 11

Comparison Group's Perceived Outcome of Attempted Suicide

Perceived Outcome	Person										Median
	20	21	22	23	24	25	26	27	28	29	
Frighten someone	2	7	7	4	6	7	7	7	7	3	7
Death	6	7	6	7	4	6	7	5	7	7	6.5
Make people see how bad you were feeling	6	7	7	5	5	6	6	5	7	4	6
Help or attention	3	3	7	7	5	7	7	4	6	3	5.5
Find out if you were loved by someone	6	6	3	6	3	7	4	2	7	4	5
Make some other person feel sorry	6	6	1	6	3	4	2	2	6	3	3.5
Escape from an impossible situation	7	7	1	1	3	7	2	3	7	3	3
Relief from an impossible state of mind	6	7	1	1	2	7	2	2	4	4	3
Influencing someone	5	1	2	3	2	7	1	1	3	4	2.5
Showing how much you loved someone	3	1	1	1	2	1	7	1	2	2	1.5
Make things easier for others	3	1	1	1	1	1	1	1	1	1	1

Note: 1=Unlikely 7=Likely.

The comparison group's perceived outcome of attempting suicide can also be derived from their comments regarding suicidal models' behavior. Following are some of the comments made:

- Person 25 commented on a friend who had attempted suicide by stating: "I don't know if he was trying to attempt suicide or trying to make a spectacle of himself. People thought he was an idiot. People were careful around him afterwards. They weren't as friendly or open with him." She also made the following comment regarding another suicide model: "A guy who attempted suicide came in to school and talked about it. It was scary having him in school. I thought he could harm someone".
- Person 26 made the following comments regarding a friend who had attempted suicide: "People think it is weird and that she does it because something is wrong with her. She does it for attention but she doesn't get attention from us".
- Person 21 made the following comments regarding a television show in which a teenager committed suicide. She stated that the impact of the show was that "suicide is selfish as you don't think about the people left behind. I could never commit suicide as I would not put my mother through it."

Compare this last comment to person 03's responses regarding a similar show: "The show really stuck out in my mind because of the turmoil the family went through. The family was hurting and wishing they could have done something". Person 03 indicated that one of her goals in taking the drug overdose was to make people see how bad she was feeling. How she perceived this show could have influenced her decision to engage in a suicidal behavior.

Both groups were asked about the short-term and long-term consequences of taking a drug overdose in terms of physical and emotional outcomes. None of the individuals in the parasuicide group reported considering any negative physical or emotional outcomes of taking a drug overdose at the time they took the overdose. Following is a sampling of the responses of the comparison group regarding the consequences of attempting suicide:

- Possible brain damage. You wouldn't be balanced psychologically. (Person 21)
- A chance of dying if not discovered soon enough. (Person 22)
- It could do things to your brains and your insides. (Person 23)
- I wouldn't know what it would do to your body if you didn't die. It could be harmful to your body and your life style. You might not be able to have a family. You wouldn't get the attention you wanted but would be sent off to a psychiatrist. (Person 24)
- I would feel like an idiot if I attempted suicide and lived. I would feel even worse. (Person 25)
- You might succeed and not mean for it to happen. Brain damage. Isolation - because people would draw away from you and you from others. (Person 26)
- I would be afraid it would work and I wouldn't take the chance. You could suffer brain damage and your body wouldn't work properly. (Person 27)
- Slower brain. Relief knowing that someone had found you in time. (Person 28)
- I would feel ashamed and embarrassed if I lived. (Person 29)

In summary, it is apparent that an important factor in explaining a low lethality suicidal behavior is the person's expectation of what the act will achieve. As stated earlier, people who engage in suicidal behaviors are more likely to have a model in their social learning history who has also exhibited suicidal behaviors. Sale et al. (1975) found that people who had personal contact with others who had attempted suicide viewed suicide attempts as being more manipulative and less being due to mental illness. On the other hand, people who had not had contact with others who attempted suicide tended to hold the opinion that the intent of the attempt was to cause death. Therefore, if one was in a crisis situation and needed a solution to achieve a certain goal *other than death*, if attempted suicide was viewed as more manipulative and less lethal, attempted suicide may be included in their hierarchy of possible solutions. If other more acceptable solutions are not available, or have been unsuccessful in the past, then attempted suicide may be chosen. For the people who view attempted suicide as leading to death, attempted suicide would not likely be considered as a possible solution to the crisis, or would be very low in their hierarchy of possible solutions. A low lethality "suicide attempt" then, could be perceived as a solution to a problem by some individuals if they thought (or hoped) that a positive change in their environment would occur which would outweigh any negative consequences of the act.

Decision Making

Human behavior is governed in large measure by the attractiveness of alternatives (Becker & McClintock, 1967). Mann and Janis (1982) stated that an implicit assumption in conflict theory is that in order to choose among alternatives, the person reduces each alternative to a single value on some scale of utility and the one with the highest value is chosen. This implies a unidimensional ordering of the options, even though the options could be considered from many perspectives. It appears that when people are dealing with multidimensional information they exhibit a predilection for linear representations, especially when representing subjective magnitudes (Holyoak & Gordon, 1984). De Soto (cited in Holyoak & Gordon, 1984) argued that individuals have a schema for ordering stimuli along single dimensions, and that they will tend to use this schema even if the stimuli are inherently multidimensional.

When evaluating options, often a solution that will satisfy all the goal requirements is unavailable. Therefore, a compromise must be reached in terms of the desired outcome. Hastie (1987) stated that individuals will typically terminate a search when an acceptable, but possibly not optimal, solution has been achieved. Therefore, instead of a perfect match between the motivation and the perceived outcome being required for the solution to be considered acceptable, an "adequate match" is settled on. Though, one can assume that a person will not make a decision to embark upon a new course of action unless she expects (or hopes) the gains will exceed the losses (Mann & Janis, 1982).

When considering an individual solution, if there is a low match between the perceived outcome of the solution and what is considered an acceptable outcome, the solution is no longer considered. For example, if a person envisioned the outcome of attempted suicide as death, if her goal was not death related she would not find a match between this behavior and her goal, and this option would have a low probability of occurring. This solution might be considered again if no other acceptable alternatives were found, as the absence of acceptable solutions may instigate a change in the problem definition.

Reevaluation marks the point in the model where the position of the solution in the response hierarchy is reevaluated. In addition to changing the position of the solution in the response hierarchy, the reevaluation stage could include redefining the problem and/or specifying new goals.

If the solution meets some implicit criteria regarding what would be considered an adequate match between a person's motivation and the perceived outcome of the behavior, then a decision as to whether the solution is acceptable at the present time is made. The present model assumes that there is rarely ever a perfect match and, therefore, even if an option is considered to be acceptable it is not necessarily acted upon. The person may decide to deliberate longer on the possible outcomes of the behavior, or she may decide to put the option on hold while she reevaluates the problem definition, the goal specification, and considers other options.

Bodenhausen and Wyer (1987) stated that searching for information may occur after a judgment has already been made primarily in an effort to confirm the judgment. Therefore, someone may make the decision to "attempt suicide" and then look for justifications for doing so. According to Mann and Janis (1982) when an individual is in a highly conflicted decision-making situation and she has little or no expectation of arriving at a satisfactory solution, or she has no means of selecting between alternatives, she will often resolve the conflict by "bolstering" the least objectionable alternative. Bolstering is an umbrella term for the cognitive tactics or defenses that enable the individual to rationalize that the decision will turn out well. This may include inventing rationalizations, exaggerating favorable consequences, and minimizing unfavorable consequences. Therefore, once a person has made a decision to "attempt suicide" she then might bolster that decision through exaggerating the positive aspects of the perceived outcome before finally choosing to implement the solution.

The length of time involved in the decision-making process could also have a bearing on the option that is chosen. If an individual attempts to consider all available options and outcomes, then she would be more likely to make a "rational" decision. However, if she does not take the time and chooses the first acceptable option without further deliberation, she may be more likely to engage in a deviant or inappropriate behavior.

The decision-making stage and the following stage will be further clarified in chapter VII where three individuals from the present study are used to illustrate the decision-making process.

Solution Implementation and Feedback

Once a solution is deemed to be acceptable, it is implemented. The feedback received will determine whether or not the problem was satisfactorily resolved. The judgement of the success or failure of the outcome represents a branching point in the problem-solving process (Rubin & Krasnor, 1986). According to Rubin and Krasnor (1986), if the strategy is judged to be successful the process ends. If the outcome is judged to be a partial success, the individual may accept the outcome to be "successful enough" and end the process, or the individual may decide to continue with the process in the same manner as if it was a failed outcome. If the strategy is judged to be a failure, the probability of occurrence associated with the failed response would be reevaluated, and the response would be less likely to reoccur. The individual may then continue with the current problem definition and goal specification and select a new strategy, or stop making attempts to satisfy the current goal. In addition, a person might continue to persevere with an unsuccessful response because of a limited hierarchy from which to choose, or because she is unable to fully access all possible responses. If the current goal is abandoned, the problem may be redefined and/or a new or modified goal may be chosen.

C. Conclusion

This chapter has outlined the basic framework of the proposed model. The use of a stage-sequential approach is not meant to imply that this is precisely the manner in which problem-solving is enacted in real life. More typically the stages will overlap and interact with each other (cf. D'Zurilla & Goldfried, 1971). Therefore, this model should not be viewed as a depiction of an invariant process, but as a framework from which the choice of suicidal behaviors can be examined.

The factors believed to contribute the most to a decision to make a suicidal behavior are: the positioning of the behavior in an individual's hierarchy within the activated schemata, the perceived outcome of the behavior, and how quickly the decision to enact the behavior is made. This model does not offer precise rules on how decision making occurs. "A flexible approach allows great latitude in thinking and research so that the end result is a level of understanding that is greater than when one starts with a rigid and precise model" (Sherman & Corty, 1984, p. 191). The next chapter will discuss mediating variables that are believed to influence whether or not a suicidal behavior will be chosen in a problem situation.

VI. MEDIATING FACTORS

An examination of the social psychology and suicidology literature revealed a number of factors that could have a mediating effect on the social problem-solving process. Most of these variables have been independently discussed within the suicidal literature, but they have not been examined within the context of a problem-solving model. These variables are impulsivity, self-efficacy, locus of control, affect, attitudes, and knowledge. It is hypothesized that these factors would have the most impact when an individual is evaluating the perceived outcome of a response option, and when determining if the option is acceptable. Following will be a discussion of these factors.

A. Impulsivity

Impulsivity may be very important to our understanding of suicidal behaviors. Even if a person is a very competent problem solver, if she is unable to inhibit the tendency to respond impulsively, this might increase the risk of deviant behaviors being chosen, especially, if as a result of social learning, a deviant behavior is high in her hierarchy of possible responses.

Many authors have referred to impulsivity as a common element in suicidal behaviors (e.g., Davis, 1983; Dorpat, 1968; Gould, 1965; Jacobziner, 1965; Miller, Chiles, & Barnes, 1982; Williams et al., 1977; 1980). In fact, up to two-thirds of suicidal acts are reported to be spontaneous or impulsive reactions to stressful interpersonal events (Williams et al., 1977; Williams et al., 1980).

Biological links connecting impulsivity and suicidal behavior have been proposed with one focus being on the cerebrospinal fluid (CSF) levels of 5-hydroxyindoleacetic acid (5-HIAA), a metabolite of the neurotransmitter serotonin. The impetus of this research came from Asberg and her colleagues in Stockholm who first reported on their observations between low levels of CSF 5-HIAA and suicide in 1976 (e.g., Asberg, Nordstrom & Traskman-Bendz, 1986; Asberg, Traskman & Thoren, 1976; Traskman, Asberg, Bertilsson, & Sjostrand, 1981).

Linnoila, Virkkunen, Scheinin, Nuutila, Rimon and Goodwin (1983) also examined the relationship between CSF 5-HIAA and impulsivity. They found low levels of 5-HIAA in the CSF of impulsive violent offenders, but not in the offenders who had premeditated their acts. The lowest 5-HIAA levels were found in those impulsive violent offenders who had also attempted suicide. They concluded that "a low CSF 5-HIAA concentration seems to be associated with a tendency towards repeated, impulsive violent behavior which can be directed both towards oneself (suicide attempts) as well as others (attempts of murder)" (p. 261).

Motto (1986) upon reviewing the research in this area concluded that more research is needed with larger samples, and that age and treatment variables need to be considered. Until that time, he stated that the inclination is to "wait and see".

The remaining research on impulsivity can be viewed from two perspectives. The first perspective discusses impulsivity in terms of being a "behavior that is socially inappropriate or maladaptive and is quickly emitted without forethought" (Oas, 1985, p.142). The second perspective discusses impulsivity in terms of being a personality trait (Barratt & Patton, 1983; Barratt,1985).

There have been a few studies that have examined the impulsive component of suicidal behaviors (e.g., Pallis & Jenkins, 1977; Patsiokas et al., 1979; Plutchik et al., 1989; Williams et al., 1977, 1980). Two of these studies examined impulsivity from the perspective of being a personality trait (Patsiokas et al., 1979; Plutchik et al., 1989). Patsiokas et al. (1979) compared 49 male psychiatric patients who had attempted suicide to 48 male psychiatric patients with no previous history of a suicide attempt on a number of variables including a measure of impulsivity. They did not find the suicide attempters to be more cognitively impulsive than the controls as measured by the Matching Familiar Figures Test, though 64% of the attempters reported that their attempt was the consequence of an impulse to kill themselves. In a subsequent 1-year follow-up study (cited in Clum et al., 1979) they found those who made repeat attempts to be more cognitively impulsive.

Plutchik et al. (1989) examined the relationship between impulsivity and suicidal intent, lethality of the attempt, and depression in 30 inpatients admitted to hospital following a suicidal behavior. They found that self-reported impulsivity was positively correlated with self-reported intent (r=.51) and depression measures, but not with physicians' ratings of lethality and intent. In fact, the correlation between impulsivity and the physicians' rating of the seriousness of the attempt was in a negative direction (r=-.25), though not statistically significant. The discrepancy between the relationship of these two indices of intent to impulsivity might be due to fact that the self-report intent scale requested the individuals to indicate their feelings or behaviors just prior to making the attempt, but did not include the circumstances following the attempt. It is possible that when a person makes an impulsive attempt, at that moment she may strongly feel that she wants to die, but shortly afterward she reconsiders her actions and then seeks out help. Therefore, one would expect impulsivity to be highly correlated with an individual's intent just prior to making the attempt, but one would expect no correlation or a negative correlation with the overall seriousness of the attempt.

Williams et al. (1977, 1980) examined impulsivity from the perspective of being a spontaneous behavior emitted without forethought. Williams et al. (1977) obtained information from 47 patients who presented at a casualty department as a result of a suicidal behavior. Defining an impulsive act as having a premeditation period of less than five minutes with no evidence of previous suicidal verbalizations, they found 53.2% of the acts to be defined as impulsive. They found no significant age or sex differences, though there was a trend for the people who were classified as impulsive to be females under the age of 30. A significant finding was obtained with regards to a past history of suicidal behaviors, with 64% of the impulsive group having a history of one or more attempts, as compared to 27% of the non-impulsive group. The implication of this finding is that prior suicidal behavior would make the behavior more available as an option under similar circumstances.

As well, the availability of the drugs used in the attempt was also significantly related to the occurrence of the impulsive acts, as for 96% of the people judged to be impulsive, the drugs taken were in the same room as the individual when the decision to take the overdose was reached. The impulsive group also took significantly more of the drugs available than did the non-impulsive group. There was also a trend for the impulsive group to have had more contact with others who had engaged in suicidal behaviors (47% vs. 22%), though this was not statistically significant. Impulsivity was not found to be related to the presence of alcohol.

Williams et al. (1980) examined 350 patients who presented at two casualty departments as a result of self-injury or self-poisoning. Using the criteria of defining an impulsive act as one in which the period of premeditation was reported as being less than five minutes, 40.4% of the people were classified as impulsive. They analyzed the data separately for each hospital and then only reported significant differences that were obtained for both samples. Impulsives, as compared to the non-impulsives, were more likely to have reported that someone observed them performing the act, to have reported that someone knew they had taken the tablets in the half hour proceeding the act, to have thought they would survive the act, to be significantly less depressed, and to be judged clinically to have preformed a tension-reducing act. No significant differences were found for sex of person, alcohol ingestion, number of previous suicidal acts, type of packaging of the pills, and modeling behavior.

For the present study, impulsivity was examined from both a trait and state perspective. Tables 12, 13 and 14 present the scores of both groups of individuals on

Table 12

BIS Motor Impulsivity Subtrait Scores

	Comparison Group Person Number	BIS Score	Parasuicide Group Person Number	
	29	35	03	10
		34		
		33		
		32		
		31	07	
Q_U*	25	30		
		29		
		28		
		27	02	
	21	26		
	20	25		
		24	09	
		23	05	
		22		
		21		
		20		
		19		
		18		
	23	17	01	06
	27	16		
	24	15	08	
	26	14		
		13		
		12		
Q_L*		11		
	22	10		
		09	04	
		08		
		07		
		06		
	28	05		
	$\overline{X}$ = 19.3		$\overline{X}$ = 23.3	
	s.d. = 9.38		s.d. = 8.82	

t=.98 n.s.

Note: Higher Scores are Associated with Greater Motor Impulsivity

* On this and other similar tables, Q_L and Q_U refer to the upper and lower quartiles of the comparison group

Table 13

BIS Cognitive Impulsivity Subtrait Scores

	Comparison Group Person Number		BIS Score	Parasuicide Group Person Number
			25	01
	20		24	05
			23	07
			22	03
			21	06
Q_U	21		20	
	29		19	08
			18	
			17	10
			16	
	24	27	15	
			14	04
			13	
			12	
	25		11	
			10	02
	23		09	09
	26		08	
Q_L			07	
	28		06	
			05	
			04	
			03	
	22		02	
	$\overline{X}$ = 12.90			$\overline{X}$ = 18.40
	s.d. = 6.90			s.d. = 5.74

t=1.94 n.s.

Note: Higher Scores are Associated with Greater Cognitive Impulsivity

Table 14

BIS Non-Planning Impulsivity Subtrait Scores

	Comparison Group Person Number			BIS Score	Parasuicide Group Person Number	
				27	06	
				26	01	
				25		
				24		
				23		
				22	04	
				21	05	
				20		
				19		
				18	02	08
	29			17		
				16	09	
Q_U	21			15	07	
	20			14		
				13		
				12	03	
				11		
				10		
				09	10	
				08		
	23	26		07		
Q_L	22	24	28	06		
	27			05		
	25			04		
	$\overline{X}$	= 8.70			$\overline{X}$	= 18.40
	s.d.	= 4.72			s.d.	= 5.76

$t=4.12$ $p<.05$

Note: Higher Scores are Associated with Greater Non-Planning Impulsivity the three subtraits of the Barratt Impulsivity Scale. As stated in Chapter 3, the Motor Impulsiveness subtrait involves acting without thinking, the Cognitive Impulsiveness subtrait involves making quick cognitive decisions, and the Non-Planning subtrait involves a lack of "futuring" (Barratt, 1985). As can be seen from the tables, there were no group differences between the comparison and the parasuicide groups on the motor and cognitive subtraits. However, on the non-planning subtrait there was a significant difference between the means of the two groups. Eighty percent of the individuals in the parasuicide group scored above the upper quartile of the comparison group. Barratt (1985) hypothesized that non-planning impulsiveness is related to social learning, while both cognitive and motor impulsiveness are related to an individual's performance on information-processing tasks. What these findings imply is that overall the parasuicide group was not different from the comparison group in terms of the processing of information, but that some of the individuals tended to be more "present" rather than "future" oriented. This is consistent with Bedrosian and Beck (1979) who, upon reviewing the literature, stated that when compared with nonsuicidal patients and normals "suicidal individuals were found to have less focus on the future and a less elaborate concept of future time perspective" (p. 91). The implication of this finding is that individuals who are more present oriented may not fully consider the long-term consequences of their behavior. As well, they may overestimate the impact of a crisis situation, as they are evaluating it in the context of the present and not looking at the long-term impact which might be less severe. Therefore, the problem might appear to be more serious to a present oriented person than to a person who is more future oriented, and consequently might result in a more drastic solution.

In terms of a state measure of impulsiveness, four of the ten individuals in the parasuicide group reported a premeditation period of less than one minute (persons 02, 04, 06, & 09). How does one explain the impulsive behavior of these individuals?

An examination of the data revealed that only these four individuals were under the influence of alcohol or drugs at the time they took the drug overdose. Hull & Reilly, (1986) upon reviewing the literature on the effects of intoxication on information processing, concluded that "information storage processes are more impaired by intoxication than retrieval processes" (p. 152). Therefore, being in an intoxicated state would not interfere with the retrieval of information needed in the problem-solving process. Instead, it is believed that alcohol contributed to a defective problem-solving process by acting in a disinhibitory manner, thus resulting in an impulsive act. According to Chiles, Strosahl, Cowden, Graham, and Linehan (1986), "if an individual is drinking and abusing drugs and no one is able to help assuage the emotional crisis, the disinhibiting influence of drugs or alcohol may heighten the probability of overt suicidal behavior" (p. 340).

Williams et al. (1980), though, did not find a relationship between impulsivity and alcohol. Their finding might be confounded by the fact that they did not control for the lethality of the behavior. It is hypothesized that individuals making a serious suicide attempt might be more likely to contemplate the action for a longer period of time and that they might use alcohol to bolster their courage. On the other hand, persons who make lower lethality attempts might be under the influence of alcohol before they have the suicidal ideation, and the attempt is an impulsive response to that ideation. If one did not control for the lethality of the attempt, one would likely find alcohol use amongst persons who deliberated a long period of time, as well as amongst impulsive attempters. The important relationship could be whether the ideation occurred prior to or subsequent to the alcohol use. For the present sample, in all four cases the alcohol/drug use preceded the ideation.

To summarize, there is reason to believe that impulsivity may influence some individuals' decision to choose a suicidal behavior. In terms of the model, if a person responds impulsively, she will not search for other options that might be more appropriate, and she may not adequately evaluate the perceived outcome of the behavior, as a decision to carry out the behavior will be made hastily. Therefore, she may choose a behavior which would otherwise have been rejected if she had taken the time to carefully evaluate the chosen option and consider other alternatives.

B. Self-Efficacy

The writings of Bandura (e.g., 1977a, 1977b, 1978, 1984) on perceived self-efficacy are felt to be pertinent to a model of problem solving. Bandura (1984) stated that perceived self-efficacy concerns an individual's judgment of her capability to execute given levels of performance.

Bandura (1977b) distinguished between efficacy and outcome expectations. An outcome expectancy is defined as a "person's estimate that a given behavior will lead to certain outcomes" while an efficacy expectation "is the conviction that one can successfully execute the behavior required to produce the outcomes" (p. 193). This distinction between efficacy expectations and outcome expectations is illustrated in Figure 5.

Figure 5 has been removed due to the unavailability of copyright permission.

Figure 5. Diagrammatic representation of the difference between efficacy expectations and outcome expectations. (From Bandura, 1977b, p. 193).

A differentiation is made between outcome and efficacy expectations because a person may believe that a particular course of action will produce certain outcomes, but she may question whether she is able to perform these actions.

According to Bandura (1977a; 1977b) sources of efficacy expectations stem from four main sources of information. These sources are performance accomplishments, vicarious experience, verbal persuasion, and emotional arousal. Personal accomplishments are the most important source of efficacy information because they are based on personal mastery experiences.

In comparison to formulations such as locus of control (Rotter, 1966) and learned helplessness (Abramson, Seligman, & Teasdale, 1978) which are based on the notion that generalized beliefs influence the way in which people choose to behave, self-efficacy theory argues that rather than overall response tendencies, people have highly specific expectations about their ability to perform highly specific behaviors (Lee, 1984). Lee (1984), upon reviewing the literature, found that efficacy expectations related to behavior along a number of domains including specific phobias, social skills, vocational choice, academic performance in children, smoking cessation, recovery from heart attacks, physical endurance, and sports performance.

Self-efficacy theory has been criticized on the grounds that efficacy expectations have not been unambiguously differentiated from outcome expectations (Eastman & Marzillier, 1984; Kazdin, 1978; Marzillier & Eastman, 1984; Teasdale, 1978). Bandura (1978, 1984) argued that it is possible to distinguish empirically between efficacy and outcome expectations with reference to their effects. When efficacy expectations are low, a corresponding low outcome expectation will result in a withdrawal from the situation and a corresponding high outcome expectation will not likely be acted upon. On the other hand, if self-efficacy is high, low outcome expectations will be associated with a variation in intensification of effort, while high outcome expectations will be associated with successful performance. It is argued, therefore, that efficacy is a more important determinant of behavior because efficacy determines the way in which a person interprets and reacts to outcome expectations (Lee, 1984).

In terms of suicidal behaviors, two apparent areas where self-efficacy could impact upon the model include self-efficacy toward problem solving and self-efficacy toward possible response options. It is not possible to discuss self-efficacy in terms of all possible options that a person might consider in a conflict situation, but one option that might have an impact on whether a suicidal option is chosen is whether the person is able to engage in help-seeking behaviors. Therefore, self-efficacy will be discussed in terms of social problem-solving ability and help seeking.

Self-Efficacy Toward Problem Solving

According to Bandura's theory of self-efficacy, perceived problem-solving ability will influence whether or not problem-solving behavior will be initiated and how much effort will be expended. One could hypothesize that a person's evaluation of her ability to solve problems could be a contributory factor in the decision to engage in a suicidal behavior, because if a vigilant problem-solving approach is not undertaken in a problem situation, then all the possible options may not be considered and/or appropriately evaluated. This may increase the likelihood that a deviant behavior may be chosen, including a suicidal behavior.

Perceived problem-solving ability and its relationship to suicidal behaviors has not been directly studied, though it has been examined in the context of hopelessness (Bonner & Rich, 1988). Bonner and Rich (1988) examined the relationship between perceived problem-solving ability, negative life stress, and hopelessness in college students. The purpose of this study was to extend Schotte and Clum's (1982) problem-solving model of hopelessness. They found that poor problem-solving self appraisal and its interaction with negative life stress to be a significant predictor of hopelessness beyond a depressed mood. They discussed these findings in the context of the relationship between hopelessness and suicidal behaviors.

Perceived problem-solving ability has also been found to relate to other variables such as: depression, in both college and clinical samples (Nezu, 1986a); number of reported personal problems (Heppner et al., 1982; Heppner et al., 1985); vocational identity (Heppner & Krieshok, 1983); self-concept, self-criticism scores, dysfunctional thoughts, irrational beliefs, and coping styles (Heppner et al., 1983).

Perceived problem-solving ability was assessed in the present study with the Problem Solving Inventory (PSI; Heppner & Petersen, 1982). The PSI items can be grouped into three subscales. These are; problem-solving confidence, approach-avoidance style, and personal control. Tables 15, 16 and 17 present the data from the three subscales. There were no significant differences between the two groups on the subscales. This would indicate that overall the parasuicide group was not less likely to engage in problem-solving behavior because of low self-efficacy toward this behavior when compared to the comparison group.

The scale that is most similar to the self-efficacy construct is the problem solving confidence scale where individuals were asked questions regarding whether they believed they had the ability to solve problems. Five individuals from the parasuicide group scored lower than the lower quartile of the comparison group. Persons 01 and 06 scored very low on this scale.

It is interesting to note that person 08 scored on the lower end of this scale but her behavior on the day she took the drug overdose indicated that she did engage in a vigilant problem-solving process. However, an examination of the options she chose revealed that they involved going to someone else to elicit help. Therefore, even though her responses on the PSI indicate that she did not believe she could

Table 15

PSI Problem-Solving Confidence Scores

	Comparison Group Person Number		PSI Score	Parasuicide Group Person Number		
	25		30			
			29			
			28			
Q_U	28		27			
	22		26			
	26		25	03		
	23	20	24	02	04	09
			23			
			22			
	24		21			
			20	10		
Q_L	29		19			
	27		18	07		
	21		17			
			16	05		
			15	08		
			14			
			13			
			12			
			11			
			10			
			09	06		
			08	01		
	$\overline{X}$ = 23.10			$\overline{X}$ = 18.30		
	s.d. = 4.23			s.d. = 6.27		

t=-2.01 n.s.

Note: Higher Scores are Associated with Greater Perceived Problem-Solving Confidence

Table 16

PSI Approach-Avoidance Style Scores

	Comparison Group Person Number		PSI Score	Parasuicide Group Person Number	
	28		30		
			29		
			28	02	
Q_U	20	22	27		
			26		
	24		25		
			24		
			23	04	
			22		
			21	07	
	27		20	09	
	23	25	19		
			18	03	
	26		17		
			16	05	10
			15	06	08
Q_L			14		
	29		13		
	21		12	01	
	$\overline{X}$	= 20.90		$\overline{X}$	= 18.40
	s.d.	= 6.14		s.d.	= 4.70

t=-1.02 n.s.

Note: Higher Scores are Associated with Less of a Perceived Approach-Avoidance Style

Table 17

PSI Personal Control Scores

	Comparison Group Person Number	PSI Score	Parasuicide Group Person Number
	22	26	
		25	04
		24	
Q_U	23	23	
	28	22	
	27	21	
	25	20	09
	26	19	
		18	02
	20	17	
		16	
	24	15	
		14	07
Q_L		13	
	29	12	01 08
		11	06
		10	03
		09	
		08	10
		07	05
	21	06	

Comparison Group		Parasuicide Group	
$\overline{X}$	= 18.10	$\overline{X}$	= 13.70
s.d.	= 5.86	s.d.	= 5.68

t=-1.71 n.s.

Note: Higher Scores are Associated with Greater Perceived Personal Control solve problems herself, she was able to engage in an appropriate problem-solving fashion because she was able to access other people to help her. Help-seeking, therefore, may be an important method of solving problems if an individual feels she is unable to solve them on her own. For example, of the five individuals who reported low self-efficacy toward problem solving on the problem-solving confidence scale, four of them indicated during the interview that if they had a problem they would go to someone for help. However, during the event that precipitated the suicidal behavior, person 01 was unsuccessful in her attempts to contact a friend, and person 06 felt she could not talk to her friends because they were mad at her. In fact, person 06 indicated that she probably would not have taken the drug overdose if her friends had not been mad at her; the implication being that she could have then talked to them. Person 07 and person 08 had tried to get advice from others but found it did not satisfactorily solve the problem, and person 05 indicated that she would not ask for help with a problem.

In summary, if an individual does not believe she has the ability to solve problems she will be less likely to search for many options in a crisis situation. This may lead to an increased chance of a deviant or inappropriate response being chosen, especially if she is unable to reach someone to help her, or she refuses to ask for help.

Self-Efficacy Toward Help Seeking

As aforementioned, self-efficacy refers to the conviction that one can successfully execute a given behavior. Therefore, as well as affecting whether one will engage in problem-solving behaviors, it could also influence how one evaluates behavioral options. It is hypothesized that self-efficacy does not play an important role in the selection of suicidal behaviors, but in the rejection of more adaptive solutions. Specifically, it is hypothesized that one reason some individuals, who engage in suicidal behaviors, may not select more socially acceptable solutions (i.e., seek help from others, or talk the problem over with the key individual(s)), is that they do not feel that they could successfully engage in this form of behavior. Some research results indirectly offer support for this position (Cantor, 1976; Parker, 1981).

Parker (1981) divided a group of suicide attempters into low and high suicide intent groups. He found that the low intent group rated "an overdose" as second only to "getting drunk" in terms of its perceived ease of action. In fact, other possible solutions such as "seeking professional help" or "talking the problem over with the key person" were perceived as much less easy.

Cantor (1976) compared 20 undergraduate students who reported that they had attempted suicide to 50 undergraduate students who reported high suicidal ideation, and to 50 undergraduates who reported low suicidal ideation. When asked whether under emotional stress they prefer to get help from someone, 100% of the suicide attempters responded "yes" as compared to 94% and 60% of the high and low suicide ideators respectively. On the other hand, when asked "if you need help from others do you go to them and ask for help?", only 5% of the attempter group responded "yes" as compared to 92% and 96% of the high and low ideator group respectively. Therefore, even though the attempters indicated a clear preference for help from others, at the same time they demonstrated a striking inability or reluctance to ask for this help. One reason for this may be feelings of low self-efficacy toward help-seeking behaviors.

Since no measure of self-efficacy toward help-seeking was available, questions were developed to elicit this information based on suggestions by Bandura (personal communication, December 1, 1986). The individuals were asked to rate how confident they were that they would be able to ask specific target persons for help regarding school work, a problem with a boyfriend, and a problem with their parents

(Appendix K). They were also asked to rate what they believed the outcome of this action would be. The target persons were a friend, a parent, a professional, and a crisis line volunteer.

The individuals seemed to have difficulty differentiating between outcome expectations and efficacy expectations on this task. For many of the individuals it appears that the perceived outcome played a major role in determining whether they would ask for help, though for a few individuals it was clear that efficacy would be a deterrent to asking for help. For example, person 05 stated that she would not have taken the overdose if "I thought I had the guts to walk up to my Mom and say let's have a serious talk. If she agreed and took it seriously I think something could have changed". She indicated that she would not have approached her mother even if she was guaranteed the outcome would be positive because she had previously tried to talk to her mother but "the words don't come out". She stated that it is "like someone glued my mouth shut". Therefore, an option that could have resulted in her not taking the drug overdose would be rejected because she did not believe that she was capable of carrying out the solution.

In summary, if an individual has a low self-efficacy toward problem-solving, this may limit her search for solutions to a problem. As well, if she has low self-efficacy toward some of the options available, this will further limit the options that she would view as acceptable. For example, person 05 was low in both problem-solving confidence and self-efficacy toward help seeking. Therefore, she would be restricted in the range of options that she would consider to be acceptable.

C. Locus of Control

Whether people believe that they can determine their own fate is important in the way in which they cope with stress and encounter challenges (Lefcourt, 1982). According to Rotter (1978), the expectancy that one can have some effect or control over what happens to oneself is perhaps the most important of all problem-solving attitudes. The Locus of Control construct (LOC; Phares, 1957; Rotter, 1966) then, could be an important factor in examining suicidal behaviors within the framework of a problem-solving model.

The underlying assumption of LOC is that people develop a general expectancy with regard to their ability to have control over their lives. People who believe that their own behavior and/or personality characteristics influence the events that occur in their lives are said to have an "expectancy of internal control". On the other hand, people who believe that the events in their lives happen due to fate, luck, chance, powerful others, or powers beyond their control are said to have an "expectancy of external control" (Harre & Lamb, 1983). According to Lefcourt (1983), internals appear to be better equipped to survive their ordeals because they do not succumb as easily to dysphoric feelings, and do not give up their effort to succeed at various tasks when compared to those people who hold external control expectations.

Jarvis et al. (1976) proposed a preliminary theoretical model for self-injury which was based, in part, on the construct of control. In this model, they contended that individuals differ with regard to their ability to determine the condition of their environment. They stated that the techniques used to implement control over one's environment are learned, and then later reinforced through the socialization process in conjunction with particular roles and situations. Unconventional means of control are more likely to be turned to by those individuals who are relatively unable to control their environment.

Jarvis et al. postulated that when facing a serious problem, people with "low control" may resort to deviance. They stated that the form this deviance takes will be dependent on the level of social integration of the individual. Those with high social integration may continue to value traditional goals and seek new and untried techniques to achieve these goals, while individuals with low social integration may abandon their hopes for achieving socially valued goals, and reject these goals and the means for obtaining them.

According to this model then, a person who is fairly integrated, but who has little control or is relatively ineffective at conventional controlling techniques, would be more likely to adopt a method such as self-injury or neurotic behavior to achieve the desired goal. The more youthful, the traditional female, and a person from a low class would tend to belong to this category. On the other hand, a person who has a low degree of social integration and a low level of control over their environment would tend to retreat inwards to alcoholism, mental illness, drug dependence, or other withdrawal.

Only a few studies have empirically examined the relationship between the LOC variable and suicide attempts. Topal and Reznikoff (1982) compared 30 hospitalized adolescents to 34 non-suicidal hospitalized adolescents, and to 35 coping controls on the Nowicki-Strickland Locus of Control Scale for Children. They found that the suicidal group differed from the control group, with the suicidal adolescents having a more external LOC, and the control group having a more internal LOC. They did not find a difference between the two hospitalized groups. The process of being hospitalized though, might have confounded this data as being in an institution might have had the result of making the individuals feel like they had less control over their lives.

Sakinofsky (1988) followed up 187 parasuicides for three months after the key episode. They compared individuals who had made repeat attempts during that three month period on a number of variables including LOC as measured by the Rotter I-E scale. They found a more external LOC to be one of the predictor variables which distinguished the two groups.

Goldney et al. (1989) found a significant relationship between suicidal ideation and LOC in individuals who participated in yearly follow-up surveys in Australia.

They found that those who reported no suicidal ideation scored in a more internal manner as compared to those who reported a degree of ideation.

Goldney (1982) examined 110 women aged 18 to 30 who had taken a drug overdose. He found that the women who had attempted suicide had a more external LOC, as measured by the Adult Nowicki-Strickland Internal-External Locus of Control scale, than a control group. As well, those within the attempter group who had made high lethality attempts scored more internally than those who had made low lethality attempts. This would indicate that persons making attempts to change their situation, not to end their lives, are those who feel that they do not have much control over their lives.

Luscomb, Clum, and Patsiokas (1980) compared male suicide attempters to psychiatric controls on the Rotter I-E LOC scale. They failed to demonstrate a clear relationship between an external locus of control and suicidal behaviors, but they did find that congruent externals (individuals whose behavior reflects their belief that their reinforcers are not contingent on their behavior), who reported high levels of stress, were more likely to be in the suicide attempter group than in the control group. As the previously mentioned study by Goldney (1982) demonstrated that the effect of LOC may be mediated by the level of lethality of the suicide attempt, these and other reported findings may be confounded by the absence of a control on the level of lethality of the attempt in the suicidal group.

McLeavey et al. (1987) did not find a significant difference between a group of self-poisoning patients and a non-patient control group on the Rotter I-E scale. They then hypothesized, as suggested by Luscomb et al. (1980), that this scale may not be sensitive to the relevant issues on which a suicide attempter group would differ from a control group, because it seems to favor items dealing with social and political events over interpersonal and intrapersonal concerns. However, they still concluded that "this variable is not an important factor in self-poisoning behavior" (p. 33).

Perhaps this conclusion is somewhat premature considering the limitations they outlined with the Rotter I-E scale, and the fact that studies using the Nowicki-Strickland scales have established relationships between LOC and suicidal behavior.

For the present study, LOC was assessed using the Nowicki-Strickland Locus of Control Scale for Children. This scale was chosen as the items had face validity in terms of measuring young people's attitudes toward control within the family setting, and in generally dealing with their problems. Table 18 presents the results for the two groups based on their total scores. There was a significant difference between the comparison and the parasuicide group in terms of their overall mean scores, and 70% of the individuals in the parasuicide group scored below the lower quartile of the comparison group.

Lester (1987) discussed the relationship between gambling behavior and LOC. He stated that those who have an external LOC are more likely to gamble, and they might attempt suicide in a manner that maximizes the gambling aspects of the outcome. The individuals in the parasuicide group that gambled the most in terms of the outcome were persons 01, 03, and 06. As can be seen, their scores were in the external LOC direction.

Two subscales were then constructed by grouping items that were related to control within the family setting (items 4, 5, 7, 15, 17, & 21) and items that were related to a general problem-solving strategy (items 1, 3, 8, 10, 13, 14 & 20). Item 7, "Do you feel that it's nearly impossible to change your parent's mind about anything?", is an example of an item from the first subscale. Item 10, "Do you feel that one of the best ways to handle most problems is just not to think about them?", is an example of an item from the second subscale. The Cronbach alphas for these two scales, calculated from the responses of the 20 individuals, were .63 and .83 respectively. Tables 19 and 20 present the results of the analyses based on these subscales. In terms of LOC within the family, there were no significant differences

Table 18

Nowicki-Strickland Locus of Control Total Scores

	Comparison Group Person Number		LOC Score	Parasuicide Group Person Number		
Q_U	22	25	19			
	24	26	18	02		
	27	28	17	09		
			16			
			15	08		
			14			
Q_L	20	23	13			
	21		12			
			11	04		
			10	05	07	
			09	03	06	10
	29		08			
			07			
			06			
			05			
			04			
			03	01		
	$\bar{X}$	= 15.40		$\bar{X}$	= 11.10	
	s.d.	= 3.69		s.d.	= 4.46	

t=-2.35 p<.05.

Note: Higher Scores are Associated with an Internal LOC

Table 19

Nowicki-Strickland Locus of Control Scores on Family Items

Comparison Group Person Number			LOC Score	Parasuicide Group Person Number		
22	24	27	6	09		
21	25	26	5	02	08	
28			4	05		
20	29		3	03	04	06
23			2	10		
			1	01	07	
	$\overline{X}$	= 4.50		$\overline{X}$	= 3.30	
	s.d.	= 1.43		s.d.	= 1.70	

t=-1.70 n.s.

Note: Higher Scores are Associated with an Internal LOC

Table 20

Nowicki-Strickland Locus of Control Scores on Problem-Solving Items

Comparison Group Person Number	LOC Score	Parasuicide Group Person Number
22 24 25 26 27 28	7	02
20	6	07
21 23	5	08 10
	4	09
	3	03 04 06
29	2	
	1	05
	0	01
$\bar{X}$ = 6.00		$\bar{X}$ = 3.70
s.d. = 1.63		s.d. = 2.16

$t=-2.68$ $p < .05$

Note: Higher Scores are Associated with an Internal LOC

between the two groups, though the three lowest scores in the parasuicide group were made by the only individuals whose precipitating events were related to a parental dispute (persons 01, 07, & 10). In terms of LOC toward problem solving in general, there was a significant difference between the two groups with more individuals in the parasuicide group endorsing an attitude that the best way to deal with problems is to avoid them.

In summary, whether a person feels that she is able to control her environment may have an effect on the options she perceives as available to her. If she does not feel that she has much control over her situation, she may look for means that will allow others to take control for her at the expense of not considering other appropriate solutions. Therefore, intentional self-injury may be one method of controlling interpersonal relations because it is a way in which relatively powerless people can exert power by demanding that others change the situation (Wilson, 1981).

D. Affect

One explanation for the reduced problem-solving ability found in disturbed individuals is that these individuals have a rigid cognitive style. Parker (1981) stated that research indicates that suicidal individuals tend to have dichotomous, inflexible thinking, narrow range of constructs, and a field dependent perceptual style which culminates in their diminished problem-solving and conflict resolving ability. Williams and Lyons (1976) stated that adolescents who are at suicidal risk are reported to display a marked rigidity in their life style and cognitive processes, thus being less able to consider alternative solutions than other young people their age.

A recent study by Perrah and Wichman (1987) concluded that cognitive rigidity is not a personality trait of suicide attempters, but seems to be a transient characteristic that is limited to a crisis period. It may be that affective states, such as anger, that are present in the crisis period could lead to constricted, rigid thinking. In fact, a growing body of literature indicates that affective states can influence cognitive processing (Isen, 1984). "The interpersonal problem-solving ability of normal people can be altered by a temporary mood state. A depressive episode itself may make its victim less capable of producing relevant solutions to, and therefore resolving, normal human problems" (Madigan & Bollenbach, 1984, pp. 111-112). Damon (cited in Rubin & Krasnor, 1986) hypothesized that affective factors such as anxiety and/or anger could mediate against higher levels of "practical knowledge" being utilized in a real-life problem situation. As well, in an emotionally aroused state an individual may be more likely to repeat, rather than change a prior strategy, since the latter option may require more complex processing (Rubin & Krasnor, 1986). Kosslyn and Kagan (1981) stated that "it is precisely in cases where one is emotionally aroused that adult processing may become disrupted" (p.93).

In terms of the present study, everyone of the 10 individuals in the parasuicide group reported that they were angry with someone at the time they took the overdose of drugs. As well, many of these individuals reported that they were unable to deal with their anger. In fact, six of the individuals in the parasuicide group indicated that if they were angry with someone they would not let them know (persons 01, 03, 06, 07, 08, 09), as compared to two of the individuals in the comparison group.

According to Safran and Greenberg (1986) emotions function as action dispositions. They stated that anger might lead to aggressive, self-protective behavior. Could suicidal behaviors be considered both aggressive and self-protective? Menninger (1938) discussed suicide in terms of being aggression directed toward a love object, that is turned inwards. In terms of being self-protective, as discussed earlier, everyone of the individuals reported that one of the goals of the suicidal behavior was to escape from the situation and from tension. At that point in the time, individuals could have viewed the behavior as self-protective because they hoped it would allow them to escape, though observers would probably view the behavior as self-destructive.

To summarize, intense affect, such as anger, could restrict the range of retrieval cues that could be used to access information (Higgins, Kuiper & Olson, 1981). As well, Eysenck (1976) argued that high levels of arousal have the effect of biasing a person's search processes toward readily accessible sources of stored information. Anger, therefore, may cue schemata that are congruent with an individual's affect, and consequently result in the inactivation of other schemata that might have been more appropriate.

E. Attitudes

One component felt to be essential to a problem-solving model is the attitudes of the person toward the response alternatives. Attitudes can play a major role in the acceptance or rejection of a solution to a problem. In terms of the relationship between attitudes and behavior, according to Cialdini, Petty, and Cacioppo (1981), researchers are no longer wondering "if" attitudes predict behaviors but "when" attitudes predict behaviors. Therefore, a model intended for behavior explanation would not be complete without a consideration of attitudes.

The focus of the following section will be on attitudes toward "attempted suicide". However, attitudes could also affect the acceptability of other response options. During the course of the interviews, statements by a number of the individuals indicated that beliefs regarding having to be "strong" and "independent" may have prevented some of the individuals from seeking help from others. For example, when person 03 was asked if she had a problem would she prefer to work it out with the help of someone or would she prefer to deal with it on her own, she responded that she would have preferred to deal with it on her own as "I am an independent person and I can do it on my own". Person 06 responded to the same question with "I would rather not involve other people with my problems", and person 07 stated, "I don't like to get other people involved".

Person 02 exemplifies how her beliefs could have resulted in a negative attitude toward a response option, thereby preventing her from choosing an option that might have helped her. She was dealing with a problem where the resolution could have been facilitated with the help of her aunt. However, she indicated that she had been having some conflict with her aunt over freedom issues and did not want her aunt to interfere in her life. As well, she indicated that she did not go her aunt for help because she tried to solve her problems on her own. She also stated that she avoided some problems because she came from a "strong family and no matter what happens you must go on". Finally, when she was asked if she could make some changes in her life what would they be, she responded, "I would take care of my problems without asking my aunt". This belief regarding having to be strong and not wanting to ask her aunt for help resulted in a negative attitude toward this response option. Therefore, just as low self-efficacy might prevent someone from seeking help in a crisis situation, so might an individual's attitude toward help-seeking.

As it was not possible to assess the individuals' attitudes toward all possible response options, the remainder of this section will focus on attitudes toward the response that these individuals chose: "attempted suicide".

According to White (1974), a disturbed family background in conjunction with a lack of training in long-term problem-solving techniques could result in hasty, ill-conceived, escape activity of which a drug overdose is but one example. She stated, though, that as the above factors have always been with us, they do not explain the choice of this method of self-harm. Instead, White feels that we must look to more general cultural factors including the "lack of moral sanctions against self-harm as a result of change in public attitudes" (p.33).

Linehan (1973) stated that when a person has reached a crisis point in which a suicidal behavior is seen as a possible response to a problem, the response chosen may be influenced by the social acceptability of that response. According to Hendin (1982) "the suggestive or socially 'contagious' element in suicide is likely to be magnified if suicide is given social sanction" (p. 224).

Henderson and Williams (1974) conceived of two groups of opposing forces which could move high-risk individuals toward or away from suicidal behavior. The first group consists of adversity and interpersonal tension, and a social factor which actively promotes suicidal behavior in some subcultures. They stated that this is mediated through the process of social modeling and through subcultural attitudes toward taking an overdose. They described the opposing force as consisting of negative attitudes toward suicidal behaviors, non-availability of tablets, and the promotion of alternative appropriate behaviors such as seeking help from friends or professionals.

Could a change of attitude in society today be responsible for the increased incidence of suicidal behaviors among young people? There is evidence that increasing numbers of people within society in the last two decades have been reevaluating the acceptability of suicide and parasuicide (e.g., Boldt, 1982; Mayo, 1983; Morgan, 1979; Sale et al., 1975). It has been stated that attempting suicide has become "fashionable" (Kessel, 1966), and that self-poisoning has become, for an increasing proportion of the population, "an acceptable means of coping with interpersonal stress" (Sale et al., 1975, p. 159). Morgan (1979) questioned whether society's increasingly tolerant stance has encouraged individuals in crisis to use self-harm as a signal of distress.

Recent research has supported the stance that the attitudes of people within society, especially the young, are moving in the direction of a tolerant attitude toward suicidal behaviors (Boldt, 1982; Curran, 1983; Droogas, Siiter, & O'Connell, 1982; Johnson, Fitch, Alston, & McIntosh, 1980; Minear & Brush, 1981; Stillion et al., 1984; Topal & Reznikoff, 1982).

Curran (1983) researched peer attitudes toward adolescents who attempted suicide. He administered questionnaires to 75 males and 75 females aged 15-19. He found that females generally held a more positive attitude toward suicidal behavior as compared to the males. In addition, within the female group, those who had themselves attempted suicide in the past were found to hold significantly more positive attitudes toward suicide attempters when compared to the non-suicidal females and to the male respondents.

Stillion et al. (1984) also found significant sex differences in attitudes toward attempted suicide. These researchers presented 10 vignettes describing different situations leading to attempted suicide to 198 twelfth-grade students. The students' task was to rate whether they sympathized, empathized, or agreed with the action of the target figure in each story. The responses showed that the females were significantly more sympathetic than were the males, and that they sympathized, empathized, and agreed more with the actions of the female target figures than they did with the male target figures. The researchers concluded that the significant sex difference may indicate that females "view suicide in a more positive light than do males" (p. 75), and that this might account, in part, for the fact that females attempt suicide more often than males.

Not only are society's attitudes important, but so are the individual's attitudes toward the behavior. Baechler (1979) stated that "it is not enough that a religion, and ethical system, customary morality, or traditional environment condemns or tolerates suicide for it to increase or decline. Everything depends on the attitude of subjects in suicidal situations concerning these things" (p. 301).

Stillion, McDowell, Smith, and McCoy (1986), examined the attitudes of females in a private psychiatric hospital. Fifty percent of these females had attempted suicide. She found that this group agreed more with all reasons for attempted suicide as compared to non-hospitalized females, hospitalized males, and non-hospitalized males.

Hawton, Bancroft, and Simkin (1978) examined psychiatric patients' attitudes toward self-poisoning. They presented them with four case histories of people who exhibited self-poisoning behavior, and found that the younger overdose persons stated more often that they would/might have done the same thing. The authors concluded that this supported their earlier impression that self-poisoning for nonsuicidal purposes was more acceptable amongst the young.

The relationship between attitudes and suicidal behaviors, though, may not be as clear as the research might suggest. As mentioned previously, people who display suicidal behaviors tend to have had contact with other people who have demonstrated suicidal behaviors. If there is a relationship between attitudes and behavior, one would expect that people who have had contact with suicidal individuals would have more acceptable attitudes toward that behavior, in comparison to people who have not had personal contact with these behaviors. One study that examined this question was conducted by Sale et al. (1975) in Hobart, Tasmania. They surveyed 120 females aged 15 and over who were drawn from two suburbs that were known to have widely differing rates of self-poisoning and self-injury. The survey was designed to measure community attitudes and beliefs concerning suicidal behaviors. Contrary to their expectations, they found that respondents who reported personal contact with people who had attempted suicide were more likely to have hostile attitudes toward this behavior as compared to the other respondents[1]. They did not find any attitude differences for completed suicide. Marks and Riley (1976) also reported a similar finding of a nonsignificant relationship between personal contact with attempted suicide and attitudes toward completed suicide. Sale et al. concluded that their findings may be due to (a) Ansel & McGee's (1971) suggestion that negative attitudes would promote the occurrence of suicidal behavior, because a suicide attempt would be responded to with hostility, and such rejection would increase the risk of future suicidal behavior; or (b) that it may be that "contact with 'attempted suicide' has a tendency to change these attitudes in a negative direction" (p. 166).

In terms of reconciling the above findings with the previous discussion on attitudes, it could be that an important factor in attempted suicide is not only the acceptability of the act, but, as stated earlier, the expectation of what the act will achieve. This hypothesis is supported by Sale et al.'s (1975) finding that the people with sympathetic or favorable attitudes tended to hold the opinion that the intent of the attempted suicide was to cause death, while the people who had unfavorable or hostile attitudes tended to believe that suicide attempts hardly ever lead to death. As well, people who had personal contact with others who had attempted suicide viewed suicide attempts as more manipulative and less due to a mental illness than people who had not had such contact. James and Hawton (1985) also found that significant others of self-poisoners were more likely to attribute manipulative motives to the overdose, and saw the behavior as a means of alleviating distress. Therefore, if one was in a crisis situation and needed a solution to achieve a certain goal that was not death related, for people who see attempted suicide as more manipulative and less lethal, attempted suicide may be included in their hierarchy of possible solutions even though their attitude toward that behavior may be negative. If other more acceptable solutions are not perceived as being available, or have been unsuccessful in the past, then attempted suicide may be chosen. For the people who view attempted suicide as leading to death, attempted suicide would not as likely be considered as a possible solution to a crisis, or would be much lower in their hierarchy of possible solutions.

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[1] Hawton and Catalan (1987) stated that the finding of Sale et al. "would suggest that a spontaneous decline in the incidence of attempted suicide might be expected as greater numbers of people come into personal contact with someone who has attempted suicide and public attitudes towards attempters become more negative" (p. 180). To the contrary, as will be argued in the paragraphs to follow, the present author believes that as greater numbers of people have personal contact with suicidal behavior there is likely to be an increase in suicidal behaviors regardless of their attitudes toward the behavior.

This might explain why suicide attempters, when compared to nonattempters, have not had more personal contact with significant others who have completed suicide, but only with more significant others who have attempted suicide (Diekstra, 1982a; Sletten, Evenson, & Brown, 1973), as they do not want to model death behavior, but behavior they hope will improve their situation. This also might explain why Sale et al. (1975) did not find a relationship between attitudes concerning suicidal behaviors and personal contact with completed suicide, as both groups would see the final result of the behavior as death. A subculture of parasuicide (cf. Platt, 1989a) might exist that is based not on attitudes, but on expectations brought about by contact with others who have engaged in suicidal behavior.

How would an individual be able to justify engaging in a behavior if her attitude toward that behavior was negative? Hastie (1987) hypothesized that an associative network of ideas toward an object could contain more than one cluster that could correspond to more than one attitude toward the object. Using abortion as an example, he proposed that an individual could have a pro-choice cluster, a pro-life cluster, and a cluster of more concrete ideas relevant to the procedure of having an abortion. An activation of one portion of the network might elicit a positive response, while another context could elicit a more negative response. Transferring these ideas to the concept of attempted suicide, it is possible that a person could have a positive schema toward attempted suicide and a negative schema toward attempted suicide. The schema activated would affect the attitude obtained. As stated in chapter V, when a person is unable to make a decision, sometimes she chooses the least objectionable alternative and then bolsters it. For example, if a person is looking for a means of bolstering her choice to take a drug overdose, because she expects the outcome will be positive, she may search for a justification for engaging in this behavior by activating her positive attitude cluster toward attempted suicide. Perhaps younger people, whose attitudes might not be as rigid, find it easier to switch between negative and positive clusters.

For the present study, attitudes toward "attempted suicide" were assessed using the semantic differential method (Osgood et al., 1957). Table 21 presents the distribution of scores for the individuals. There were no significant mean differences between the two groups, with a wide range of attitudes being endorsed by both groups. One difficulty in assessing the parasuicide group's attitudes is that these attitudes were collected after the behavior had occurred. The attitudes that they reported are likely not the same attitudes that they accessed just prior to engaging in the behavior. In fact, data obtained from person 04 and person 10 indicated that this was the case. Using the same semantic differential scale, they were asked to report on what their attitude toward attempted suicide was prior to their own behavior. Person 04 was to base this on how she viewed her uncle's prior suicidal behavior, and person 10 was asked to report on her attitude just prior to taking the overdose. They reported attitudes that were much more positive prior to the overdose as compared to their attitudes reported during the interview.

From examining Table 21, it is apparent that at the time of the interview five of the individuals in the parasuicide group held much more negative attitudes toward attempted suicide as compared to the other individuals in the parasuicide group. Their attitudes may have been influenced by their perceived outcome of the behavior, as attitudes toward performing a behavior are assumed to be a function of the

Table 21

Attitudes Toward Attempted Suicide

	Comparison Group Person Number	Attitude Score	Parasuicide Group Person Number
	20	100-104	
Q_U	21	95-99	02 04
	25 29	90-94	
	23 27	85-89	
	22 28	80-84	08 10
Q_L		75-79	06
	26	70-74	
		65-69	07
		60-64	03 09
	24	55-59	
		50-54	05
		45-49	
		40-44	
		35-39	
		30-34	
		25-29	01
		20-24	
	$\overline{X}$ = 84.2		$\overline{X}$ = 71.1
	s.d. = 12.91		s.d. = 21.88

t=-1.63 n.s.
Note: Lower Scores are Associated with More Positive Attitudes

perceived consequences of the behavior and the evaluation of those consequences (Berndt, 1981). For example, four of the five individuals with negative attitudes spontaneously commented on the negative experience of having taken the drug overdose, while none of the individuals with more positive attitudes made any comments regarding any negative consequences of having taken the drug overdose. It could be that for the individuals who reported negative outcomes, their thoughts regarding the negative outcome of the behavior cued the cluster containing negative attitudes toward attempted suicide.

One could also hypothesize that the individuals with more positive attitudes would be at greater risk for repeating the behavior. In fact, when the individuals were asked if they thought they would attempt suicide again, all the individuals who had reported negative attitudes (persons 02, 04, 06, 08, & 10) responded that they would not. However, the other five individuals, with more positive attitudes (persons 01, 03, 05, 07, & 09), indicated that they thought they would attempt again, or that they did not know for sure. Person 01, who held the most positive attitude of all, "attempted suicide" again within the week following her participation in the study. Therefore, a person's attitude toward attempted suicide following a suicide attempt, might be a strong predictor of future attempts.

In summary, in addition to evaluating the attitude component of attempted suicide, it is also important to determine if attempted suicide is viewed as a problem-solving method that does not lead to death. If a person believes that attempted suicide does not lead to death, but to a change in her environment, this behavior may become one more solution that is available to her in a crisis situation. This is not to imply that attitudes do not have an effect on the behavior chosen. If a person had a positive attitude, she would be much more likely to choose the behavior than if she had a negative attitude, but a negative attitude would not preclude the choice of the behavior, especially if the perceived outcome was desirable.

This might explain why there has been an inconsistency between attitudes and behavior reported in the literature. Bargh (1984), after reviewing the literature on attitude-behavior consistency, stated that the common theme is that consistency is poor because the representation of the object and the representation of the attitude are only weakly connected in long-term memory. One other explanation could be that even though a person's attitude may be negative, other available options may be perceived even more negatively in terms of the person's attitudes and how she perceives the outcomes. Consequently, the least negative option may be chosen. When examining the behavior-attitude consistency, therefore, one cannot only look at the attitudes toward the chosen option, but one must also look at the attitudes toward, and the perceived outcomes of, the rejected options.

F. Knowledge

One factor involved in the determination of possible outcomes of a solution is the knowledge the individual has regarding the solution. How an individual perceives the outcome of suicidal behaviors will be influenced by the knowledge (or lack of knowledge) of the possible negative outcomes associated with suicidal behaviors. Even though suicidal behaviors may result in a "moratorium from stress" and /or positive action from the environment, this behavior can also be dangerous because its "repercussions with regard to personal safety and the response of others is so unpredictable" (Morgan, 1979, p. 122).

Hawton (1982) reported that 80% to 90% of adolescents referred to hospital after a suicide attempt have taken a drug overdose. While serious suicide attempts are seen as being well thought out, most overdoses are viewed as being impulsive (Davis, 1983; Hawton, 1982; Hawton & Catalan, 1982). In line with the impulsivity of this behavior, most adolescents use readily available drugs as the poisoning agent, most commonly aspirin and paracetamol (Tylenol) (Hawton, 1982; Hawton &

Catalan, 1982; Morgan, 1979). Because of this impulsivity, serious risks are involved because often the dangerous effects of the substance(s) used, and the likelihood of receiving help, have not been well thought out (Hawton & Catalan, 1982).

The dangerous toxicity of such drugs, even in moderate overdosage, emphasizes the serious aspect of self-poisoning. Morgan (1979) reported that "chronic organic brain syndromes with persistent disorder of memory may occur following head injury or cardiac arrest in severe drug overdose" (p. 138). As well, severe hepatic dysfunction and damage can occur from paracetemol overdose (Davidson & Eastham, 1966; Gazzard et al., 1976; Kingston & Hawton, 1977).

Despite the dangers inherent to self-poisoning, most people who take overdoses are unaware of the toxicity of the substances used (Hawton & Catalan, 1982). Gazzard et al. (1976) sampled 107 persons who chose paracetamol as a self-poisoning agent. They found that only twelve of the 107 persons knew that liver failure was a feature of a paracetamol overdose. Of the 48 interviewed, none would have chosen paracetamol had they known than there was an interval of two to three days before the onset of serious symptoms.

Fox and Weissman (1975) found that patients who had taken intentional drug overdoses, as opposed to more violent methods of parasuicide, had the *least intent* to die but the medical effects of their attempts were the *most serious*.

McIntire and Angle (1981), when commenting on adolescents who use self-poisoning with the belief death will not occur, stated that these people were not attempting suicide but attempting to alter their life situation through "pharmacologic brinkmanship". They further stated that tragic results can occur as these people do not understand the toxicology of this pharmacologic game.

Comments made by two individuals in the present study, as they were describing their previous contact with suicidal behaviors, provided an opportunity to derive what they viewed the consequences of a drug overdose to be. Person 08 indicated that when her friend called her after taking a drug overdose she went over to his house and "took his temperature" and "gave him milk to drink". She was obviously unaware of the potential danger of his drug overdose. When person 23 was describing a friend's drug overdose she commented "she only took Tylenol" as if it was a harmless drug.

Both groups were asked about what they thought the short-term and long-term consequences of taking a drug overdose would be in terms of physical and emotional outcomes. All of the individuals in the parasuicide group reported not considering any negative physical or emotional outcomes of taking a drug overdose prior to having engaged in this behavior. Person 10 is fairly representative of what the others seemed to be thinking. She stated, "I didn't think anything would happen until I went to sleep. I didn't think about whether I could cause damage if I didn't die. I thought maybe I could feel like somebody really wanted me and understood me".

It may be that when the option of attempted suicide is evaluated, only the possible positive consequences of the behavior are considered, as most people may be unaware of the negative consequences of suicidal behaviors. "It is likely that few lay people have any clear ideas about the dose needed to produce death from most drugs" (Plutchik et al., 1989, p. 78). Without this knowledge, a faulty and dangerous decision could be made during the problem-solving process.

G. Conclusion

In summary, a number of factors are b[illegible]o influence how a person evaluates a response option. All these factors could have the consequence of limiting the number of options an individual perceives as having available and/or might result in her not adequately evaluating her options. Mean differences between the two groups do not determine importance. It is the individual scores that will provide information on how these factors influenced an individual's response. The next chapter will provide three case illustrations that will exemplify the model and the impact of some of the mediating variables on the problem-solving process.

VII. CASE ILLUSTRATIONS

In this chapter three cases will be described in detail to illustrate the components of the proposed social information-processing model. Two of the cases are from the parasuicide group. The first person (person 10) was chosen because the decision-making process she went through on the night she "attempted suicide" demonstrates very clearly the phases of the model. The second person (person 09) was chosen because she provides an example of how impulsivity can influence the decision-making process. These two individuals were also chosen because their personal histories did not reveal self-destructive behaviors, and they reported good relationships both within and outside their families. Thus, they could have been considered "low risk" for engaging in parasuicide. The third person (person 24) is from the comparison group and was chosen because she had previously considered taking a low lethality drug overdose but rejected it as an option.

A. Case 1: Amy[1]

Background

Amy (person 10) was 15 years of age and the second youngest child in a family of four children. As stated in chapter IV, when Amy was 11 years of age she suffered a severe head injury in a car accident and as a result she seemed to have difficulty controlling her temper and often responded impulsively to conflict situations.

Family Relationships

Amy described the relationships within her family as positive. She stated that her parents' relationship was "really good". She indicated that she had been getting along much better with her father over the previous six-month period. Prior to that time they used to "fight a lot". She described her relationship with her mother as "really good" and she stated that she got along "pretty good" with her other family members. When she was asked if her family communicated openly with each other, she responded that her family "usually talks about things but I keep things to myself". She then clarified this by stating that she did tell her mother "things".

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[1] To enhance the readability of the text person 10 will be referred to as Amy, person 09 will be referred to as Sarah, and person 24 will be referred to as Kathy.

Interpersonal Problem-solving Approach

Amy's parents appeared to have modeled appropriate decision-making skills. Amy indicated that she had been included in decision making when it regarded family matters. As well, when her parents had a decision to make "they talk it out and then ask the kids how we feel about it". She indicated that she also participated in family decisions regarding discipline and behavior standards as her parents asked her for her opinion and "they listen to it".

Based upon her responses to the Problem Solving Inventory and the Barratt Impulsiveness Scale, Amy appeared confident in her ability to solve most problems provided she took the time to think them through carefully. However, her responses also indicated that she perceived herself as rarely taking the time to think through problems, but instead responded to most situations in an impulsive manner by "doing and saying things without thinking".

Her responses on these instruments were supported by her responses given during the interview to questions dealing with her actual behavior in problem situations. Amy stated that the children within her family resolved conflicts by getting into "fist fights" but her mother made them talk to each other. She implied that she was the catalyst for these fights as, "I usually get blamed for fighting and arguing". Amy also stated that she resolved problems with other people by getting into arguments. For example, she was suspended in Grade 7 for fighting with another student, and she was asked to quit school in Grade 9 for "flipping out" at the school counselor. It appeared, then, that Amy had a tendency to react impulsively to situations without considering the consequences of her behavior.

Social Support

Amy indicated that she could go to her sister, her parents, and a close friend for help or support with a problem, but she expressed a reluctance to do so. This reluctance did not appear to be due to a low self-efficacy toward help-seeking, as she indicated on the Help-Seeking Questionnaire that she was very confident she could ask for help with a problem. Instead, her reluctance appeared to be due to her attitude toward help-seeking. For example, when she was asked if she needed help from someone would she go to them and ask for help, she responded, "not usually because I don't like asking people for things because I would feel indebted to them". As well, she indicated that she would prefer to deal with a problem on her own rather than with the help of someone as "I don't like to be a burden on anyone". However, she did state that if she could not solve a problem on her own she would then ask someone for help.

Suicidal Models

Amy reported no personal contact with "attempted" or completed suicide. However, she reported that a friend of hers had threatened suicide. Her friend was having many problems at home and she wanted to "hurt her parents by committing suicide but didn't want to die". Amy also stated that her friends told her about a movie they saw in health class where "a girl was going to attempt suicide and all her friends got together and helped her". In addition, she remembered discussing in school the methods some people used to kill themselves, noting that "pills are one of the slowest ways but least painful".

Precipitating Event

On the night Amy took the drug overdose she had an argument with her cousin and her mother. Her cousin had been living with her family for the past month and she had a "crush" on him. He called Amy that night from her sister's house and told her he was not going to go to a party with her the following evening even though he had previously committed to going. She stated "it was too late to cancel and I had told all my friends he was coming". She tried arguing with both her cousin and her sister about the situation but ended up getting mad at both of them. Amy then tried arguing with her mother in an attempt to persuade her to make her cousin go to the party, but to no avail. She then started "freaking out" at her mother, at which point her mother became angry. Amy then went to her room.

Options Considered

The following analysis of the options Amy considered will be described within the framework of the proposed model[2]. The precipitating event in this situation was Amy's cousin's refusal to go to the party. The problem was first defined as "he is backing out of going to the party", but during the process it changed to "no one understands me". In terms of the goal specification, her initial goal was to get her cousin to go to the party with her, and her final goal was interpersonal communication. This case illustrates how the problem definition and goal specification can change during the problem-solving process.

As indicated above, Amy's first response to the situation was to argue with her cousin, her sister, and her mother, and when that did not succeed to get angry. This behavior was consistent with her usual response to conflict situations. The darkened line in Figure 6 shows the pathway of this overall response in the context of the model. The pathway is shown to loop from the reevaluation stage to the problem definition stage, and then it is assumed that the process repeated. As stated in Chapter V, a person might continue to persevere with an unsuccessful response because no other responses are presently available. When the feedback from her mother became more negative, Amy abandoned the option of arguing with her mother and she went to her room (Figure 7).

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[2] As it was not possible to assess all of the thought processes that occurred during the time these individuals were trying to solve their problem, licence will be taken when attributing some of the thoughts and feelings to these individuals.

Once in her room, Amy tried beating up a pillow but "it didn't make me feel any better". At this point it is hypothesized that she was feeling like no one understood her. As well, the fight probably accentuated her recent feelings of not being treated fairly by her mother, as she stated that she was mad that her cousin's "curfew is different than mine even though he is a little younger".

Amy felt a need to talk to someone and she thought of calling a friend (Figure 8). The goal of calling her friend was probably to express her anger, and to talk to someone who would understand how she was feeling and could commiserate with her. She rejected this option almost immediately because she realized it was too late at night to phone her friend.

The next option she reported considering was to "run away" (Figure 9). It is surmised that initially the goal was to express anger and to escape from the situation. After she deliberated upon the outcome of this option her goals were revised to include "to make them concerned and to make them understand". It is hypothesized that at first she perceived the outcome as matching her goals, but that after she deliberated further on the outcome she rejected this option as "I didn't have anywhere to go at that time of night" (Figure 10). Amy's consideration of this solution illustrates the loop in the model that allows for an initial match between a person's goals and the perceived outcome of the solution, but that after further deliberation on the perceived outcome the solution is rejected.

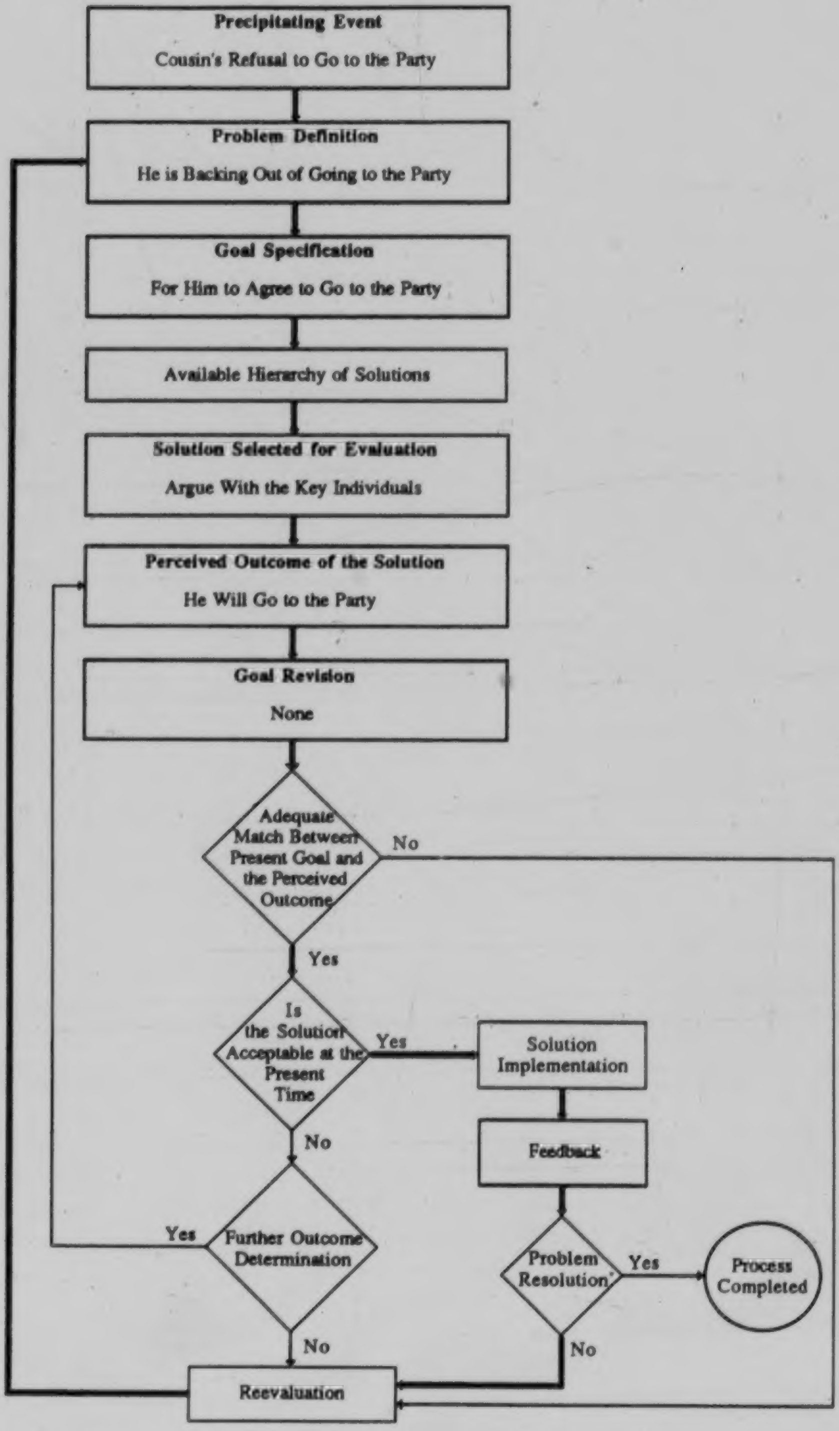
Precipitating Event
Cousin's Refusal to Go to the Party
Problem Definition
He is Backing Out of Going to the Party
Goal Specification
For Him to Agree to Go to the Party
Available Hierarchy of Solutions
Solution Selected for Evaluation
Argue With the Key Individuals
Perceived Outcome of the Solution
He Will Go to the Party
Goal Revision
None
Adequate Match Between Present Goal and the Perceived Outcome
No
Yes
Is the Solution Acceptable at the Present Time
Yes
Solution Implementation
Feedback
No
Yes
Further Outcome Determination
Problem Resolution
Yes
Process Completed
No
No
Reevaluation

Figure 6. Initial pathway for the solution "Argue With the Key Individuals" (Case 1: Amy).

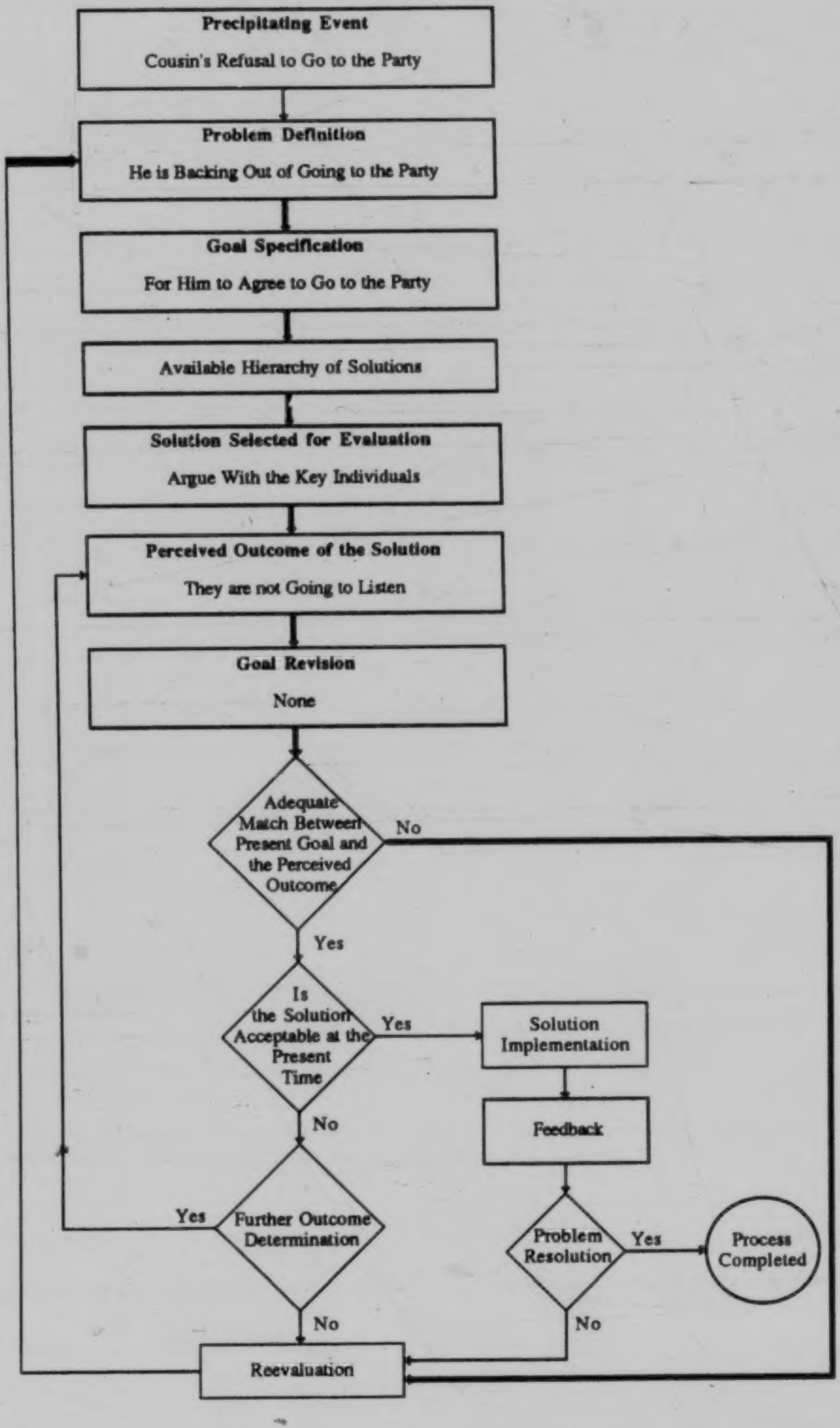
Precipitating Event
Cousin's Refusal to Go to the Party
Problem Definition
He is Backing Out of Going to the Party
Goal Specification
For Him to Agree to Go to the Party
Available Hierarchy of Solutions
Solution Selected for Evaluation
Argue With the Key Individuals
Perceived Outcome of the Solution
They are not Going to Listen
Goal Revision
None
Adequate Match Between Present Goal and the Perceived Outcome
No
Yes
Is the Solution Acceptable at the Present Time
Yes
Solution Implementation
Feedback
No
Further Outcome Determination
Yes
No
Problem Resolution
Yes
Process Completed
No
Reevaluation

Figure 7. Final pathway for the solution "Argue With the Key Individuals" (Case 1: Amy).

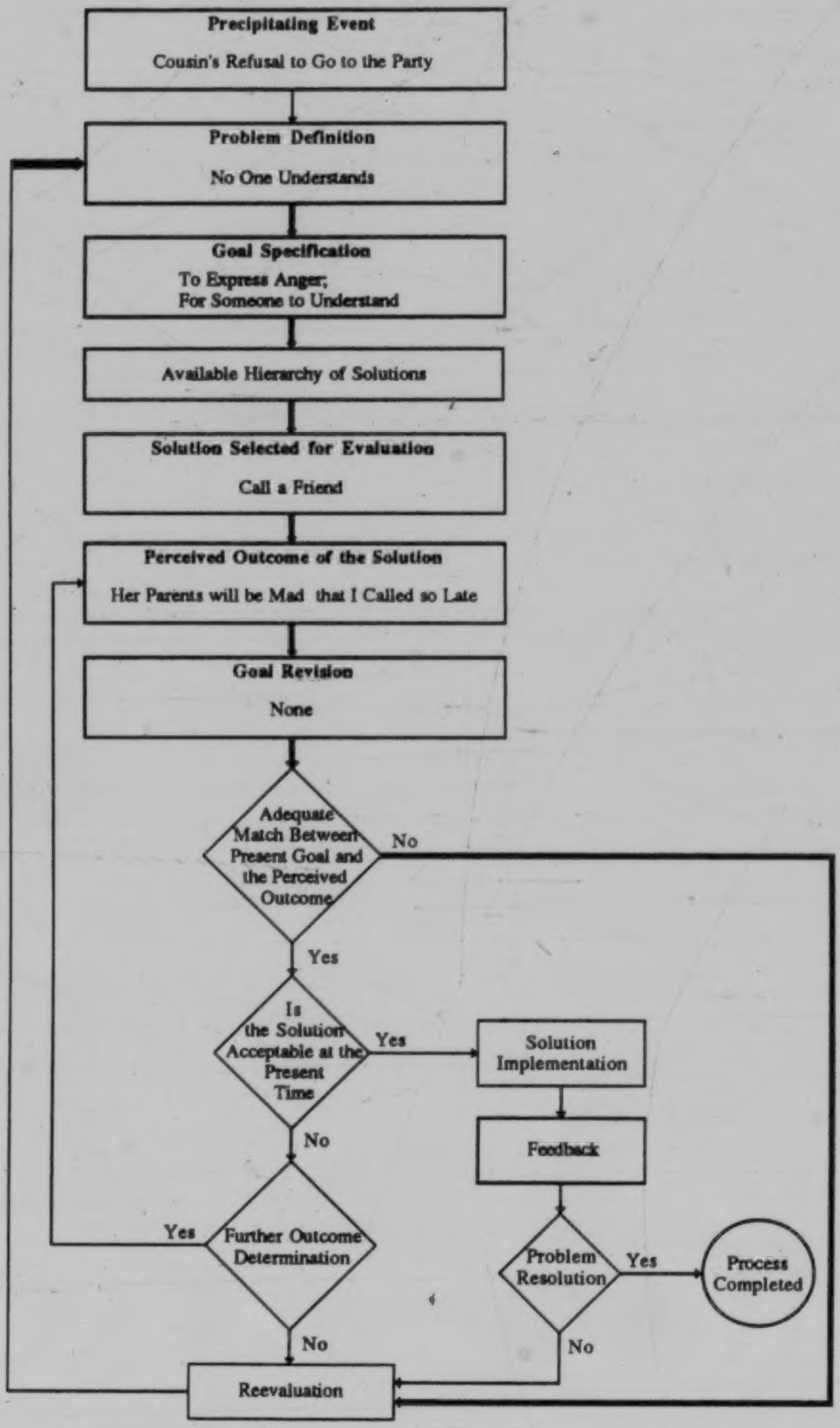
Precipitating Event
Cousin's Refusal to Go to the Party
Problem Definition
No One Understands
Goal Specification
To Express Anger;
For Someone to Understand
Available Hierarchy of Solutions
Solution Selected for Evaluation
Call a Friend
Perceived Outcome of the Solution
Her Parents will be Mad that I Called so Late
Goal Revision
None
Adequate Match Between Present Goal and the Perceived Outcome
No
Yes
Is the Solution Acceptable at the Present Time
Yes
Solution Implementation
Feedback
No
Yes
Further Outcome Determination
Problem Resolution
Yes
Process Completed
No
No
Reevaluation

Figure 8. The pathway for the solution "Call a Friend" (Case 1: Amy).

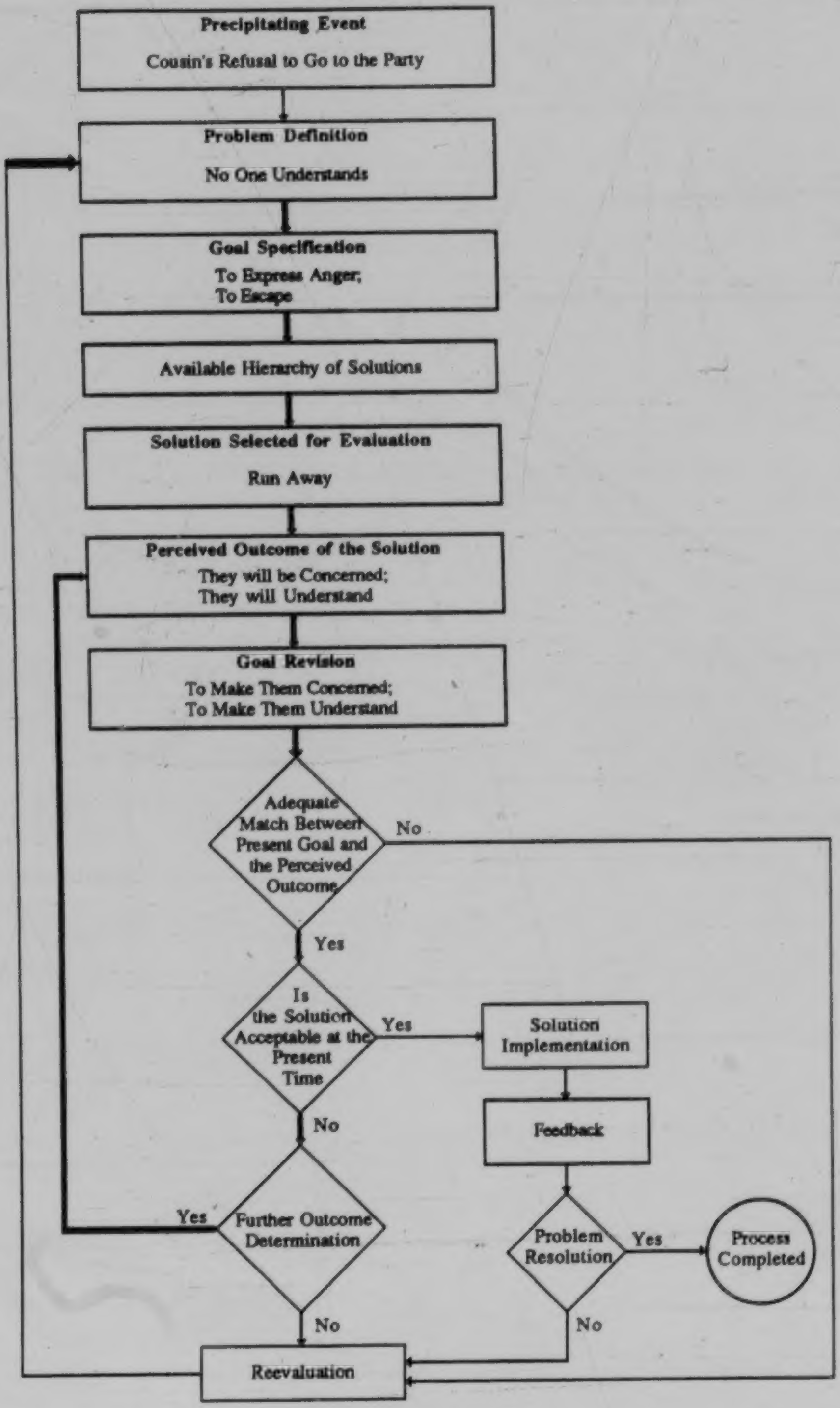
Precipitating Event
Cousin's Refusal to Go to the Party
Problem Definition
No One Understands
Goal Specification
To Express Anger;
To Escape
Available Hierarchy of Solutions
Solution Selected for Evaluation
Run Away
Perceived Outcome of the Solution
They will be Concerned;
They will Understand
Goal Revision
To Make Them Concerned;
To Make Them Understand
Adequate Match Between Present Goal and the Perceived Outcome
No
Yes
Is the Solution Acceptable at the Present Time
Yes
Solution Implementation
Feedback
No
Yes
Further Outcome Determination
Problem Resolution
Yes
Process Completed
No
No
Reevaluation

Figure 9. Initial pathway for the solution "Run Away" (Case 1: Amy).

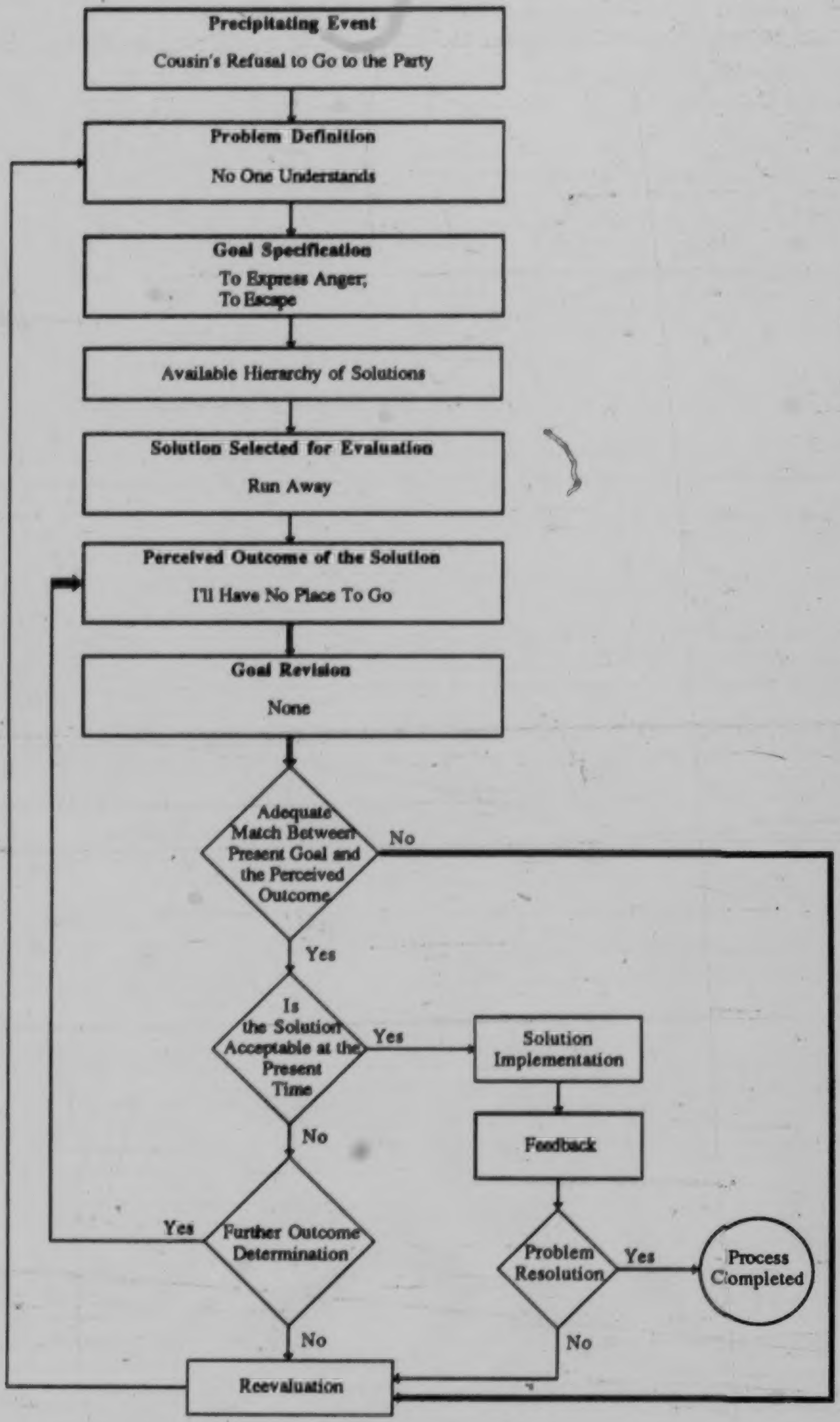
Precipitating Event
Cousin's Refusal to Go to the Party
Problem Definition
No One Understands
Goal Specification
To Express Anger,
To Escape
Available Hierarchy of Solutions
Solution Selected for Evaluation
Run Away
Perceived Outcome of the Solution
I'll Have No Place To Go
Goal Revision
None
Adequate Match Between Present Goal and the Perceived Outcome
No
Yes
Is the Solution Acceptable at the Present Time
Yes
Solution Implementation
Feedback
No
Yes
Further Outcome Determination
Problem Resolution
Yes
Process Completed
No
No
Reevaluation

Figure 10. Final pathway for the solution "Run Away" (Case 1: A.my).

She next considered "attempting suicide" by taking an overdose of pills she had noticed on the stove in the kitchen (Figure 11). She stated that while she was fighting with her cousin and her mother she was thinking "I wish I was dead", but that she was not thinking about killing herself[3]. It is hypothesized that this thought triggered the memory of her friend who threatened suicide because she was angry at her parents. She stated that she chose taking a drug overdose as the preferred method as "it would be less painful" as compared to "slitting my wrists". As mentioned earlier, she also remembered discussing in school that a drug overdose is the slowest and least painful method of suicide.

After considering the option of "attempting suicide" for a few minutes, Amy put the option "on hold" as she reevaluated the problem and her goals (Figure 12). It is hypothesized that she decided to put the option on hold because she was unsure of the outcome of taking a drug overdose having had no experience with this option. In addition, she was still hoping her mother would make her cousin go the party, a goal the drug overdose was unlikely to achieve. This stage in the process illustrates the loop in the model where after a solution has been deliberated on for a period of time it is not necessarily rejected, but rather it is put aside while another solution is being considered.

Amy then decided to try reasoning with her mother one more time in a "calmer attitude" (Figure 13). Her goal was probably to make her mother understand her position, and consequently have her mother make her cousin go to the party. However, her mother would not listen to her and told her to "drop the whole thing".

When the strategy of talking to her mother in a "calmer attitude" did not succeed, she took the pills from the kitchen and went back to her room. At this point

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[3] For some adolescents, the thought "I wish I was dead" is probably quite a common response in an angry situation. However, the intention of killing oneself is not usually present.

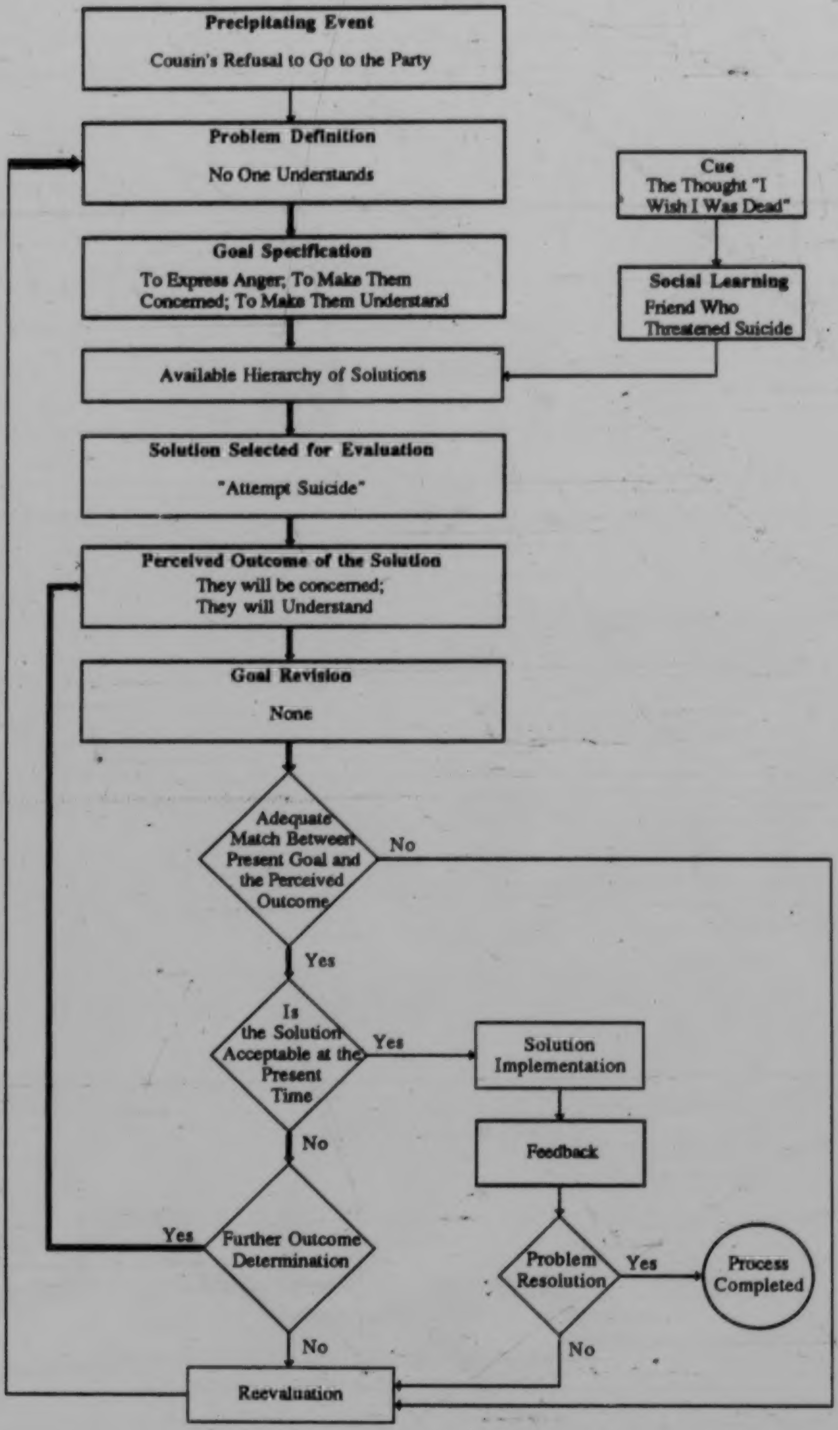
Precipitating Event
Cousin's Refusal to Go to the Party
Problem Definition
No One Understands
Cue
The Thought "I Wish I Was Dead"
Goal Specification
To Express Anger; To Make Them Concerned; To Make Them Understand
Social Learning
Friend Who Threatened Suicide
Available Hierarchy of Solutions
Solution Selected for Evaluation
"Attempt Suicide"
Perceived Outcome of the Solution
They will be concerned;
They will Understand
Goal Revision
None
Adequate Match Between Present Goal and the Perceived Outcome
No
Yes
Is the Solution Acceptable at the Present Time
Yes
Solution Implementation
No
Feedback
Yes
Further Outcome Determination
Problem Resolution
Yes
Process Completed
No
No
Reevaluation

Figure 11: Initial pathway for the solution "Attempt Suicide" (Case 1: Amy).

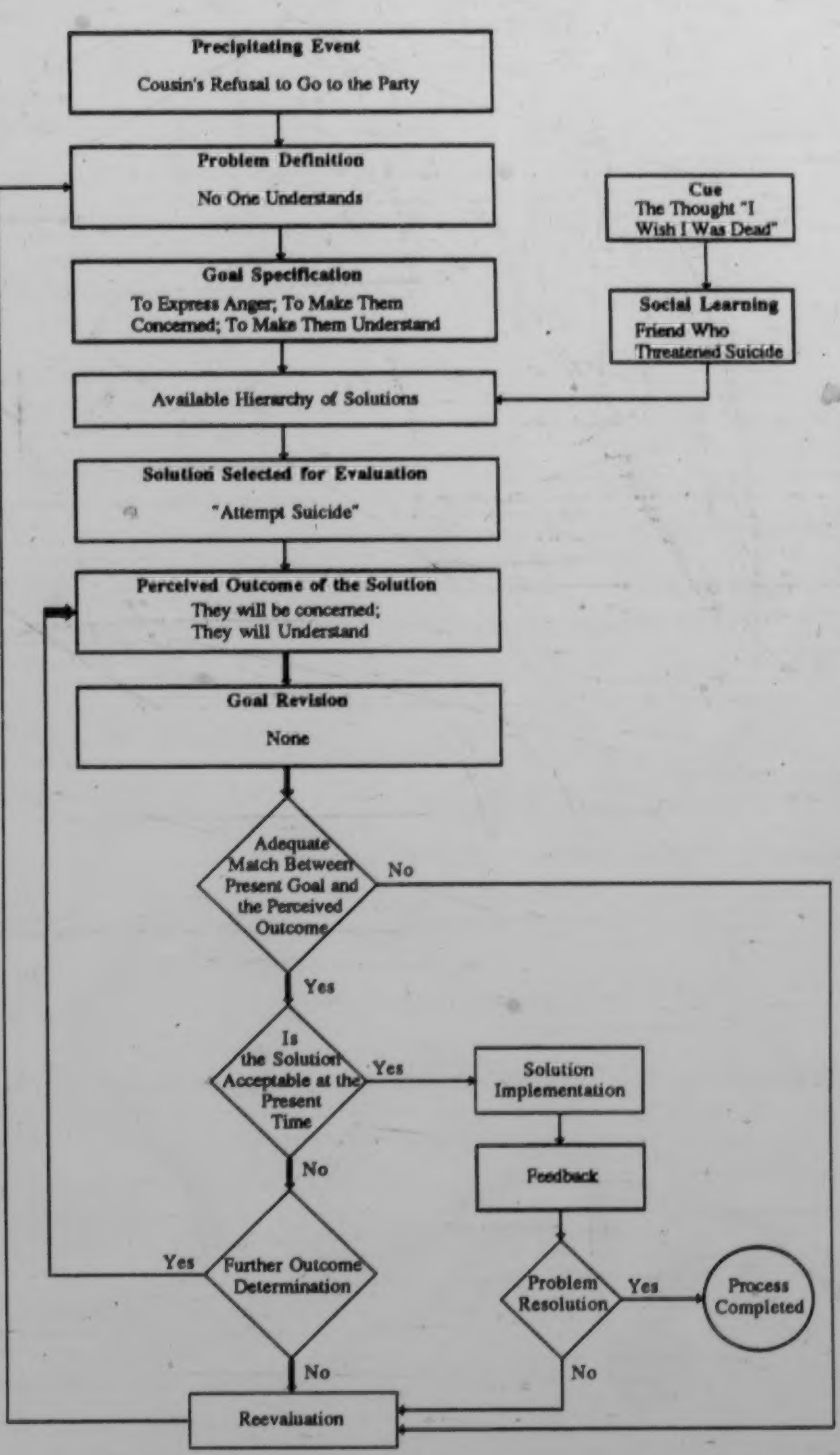
Precipitating Event
Cousin's Refusal to Go to the Party
Problem Definition
No One Understands
Goal Specification
To Express Anger; To Make Them Concerned; To Make Them Understand
Cue
The Thought "I Wish I Was Dead"
Social Learning
Friend Who Threatened Suicide
Available Hierarchy of Solutions
Solution Selected for Evaluation
"Attempt Suicide"
Perceived Outcome of the Solution
They will be concerned;
They will Understand
Goal Revision
None
Adequate Match Between Present Goal and the Perceived Outcome
No
Yes
Is the Solution Acceptable at the Present Time
Yes
Solution Implementation
Feedback
No
Yes
Further Outcome Determination
Problem Resolution
Yes
Process Completed
No
No
Reevaluation

Figure 12: Final pathway for the solution "Attempt Suicide" (Case 1: Amy).

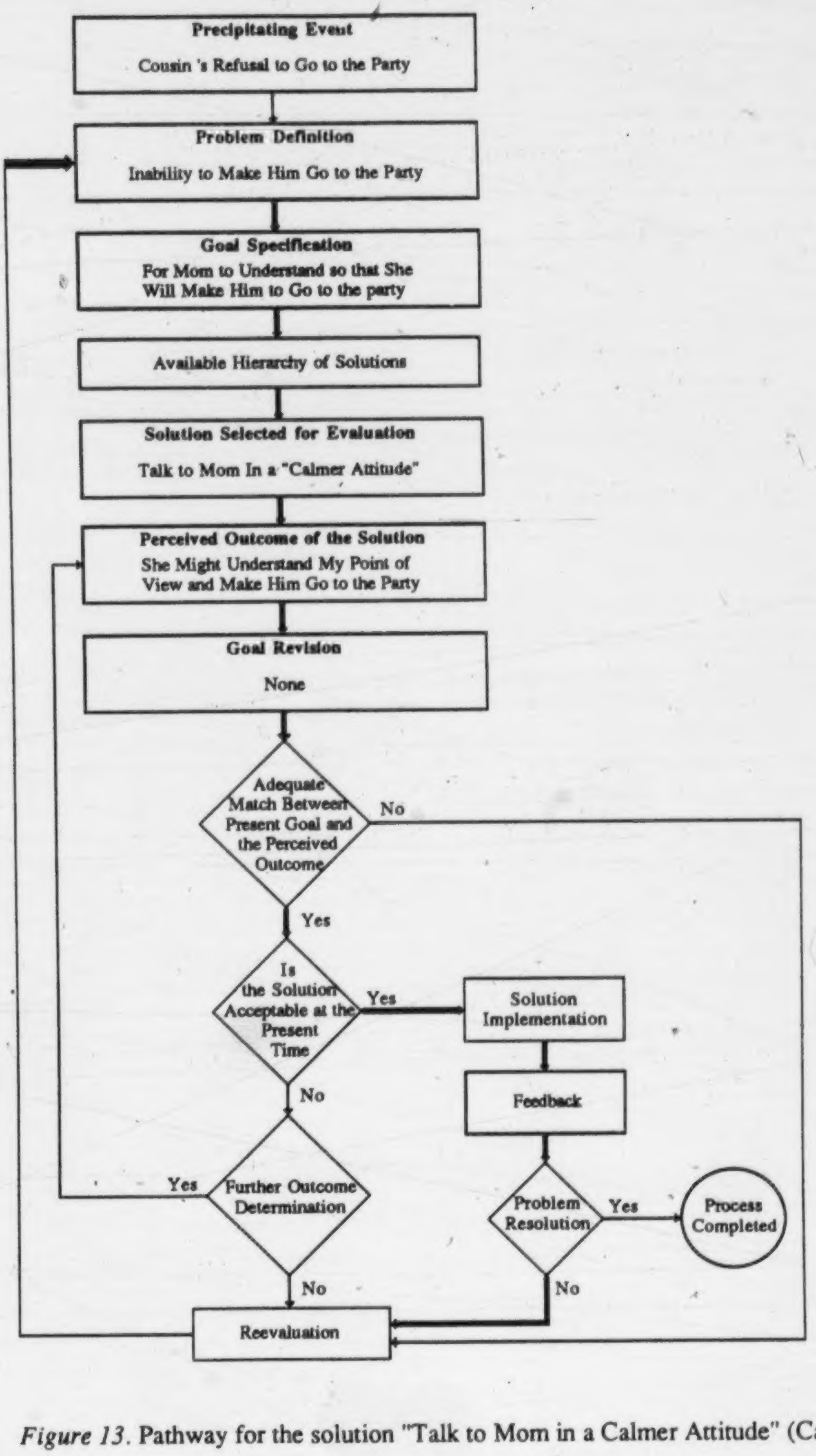
Precipitating Event
Cousin 's Refusal to Go to the Party
Problem Definition
Inability to Make Him Go to the Party
Goal Specification
For Mom to Understand so that She Will Make Him to Go to the party
Available Hierarchy of Solutions
Solution Selected for Evaluation
Talk to Mom In a "Calmer Attitude"
Perceived Outcome of the Solution
She Might Understand My Point of View and Make Him Go to the Party
Goal Revision
None
Adequate Match Between Present Goal and the Perceived Outcome
No
Yes
Is the Solution Acceptable at the Present Time
Yes
Solution Implementation
Feedback
No
Further Outcome Determination
Yes
No
Problem Resolution
Yes
Process Completed
No
Reevaluation

Figure 13. Pathway for the solution "Talk to Mom in a Calmer Attitude" (Case 1: Amy).

she deliberated on taking the drug overdose for approximately five minutes (Figure 14) and then made the decision to implement this solution (Figure 15). She perceived the outcome of the drug overdose to be concern from her cousin and her mother, and that her mother would understand her point of view. She said, "I thought maybe I could feel like somebody really wanted me and understood me". She also indicated on one of the instruments that she wanted to find out if she was loved by someone. Upon being probed she stated, "in a way my cousin". Amy indicated that she would not have taken the overdose if "my Mom had understood me or my cousin had talked to me nicely".

It is possible that Amy's perception regarding the outcome of the behavior was based upon the response of her family to the serious accident she was involved in when she was younger. She said that her parents "were scared they were going to lose me. - We got closer". Regarding any negative physical consequences of the drug overdose, Amy stated, "I didn't think anything would happen until I went to sleep".

It is hypothesized that during the time period just prior to taking the drug overdose Amy was bolstering this alternative through accentuating the possible positive consequences of the action and minimizing the potential negative consequences. Support for this comes from her responses on the Semantic Differential. She was asked to specify what her attitude toward "attempted suicide" was just prior to taking the drug overdose. She endorsed items that indicated that she viewed this option as "unselfish", "strong", and "right". She also indicated that she thought it was romantic. However, when she was asked to specify her attitude at the time of the interview, her attitude toward "attempted suicide" was quite negative.

It seems that the major contributing factor to Amy taking the drug overdose was that she exhausted her repertoire of available options. Amy stated that when she is

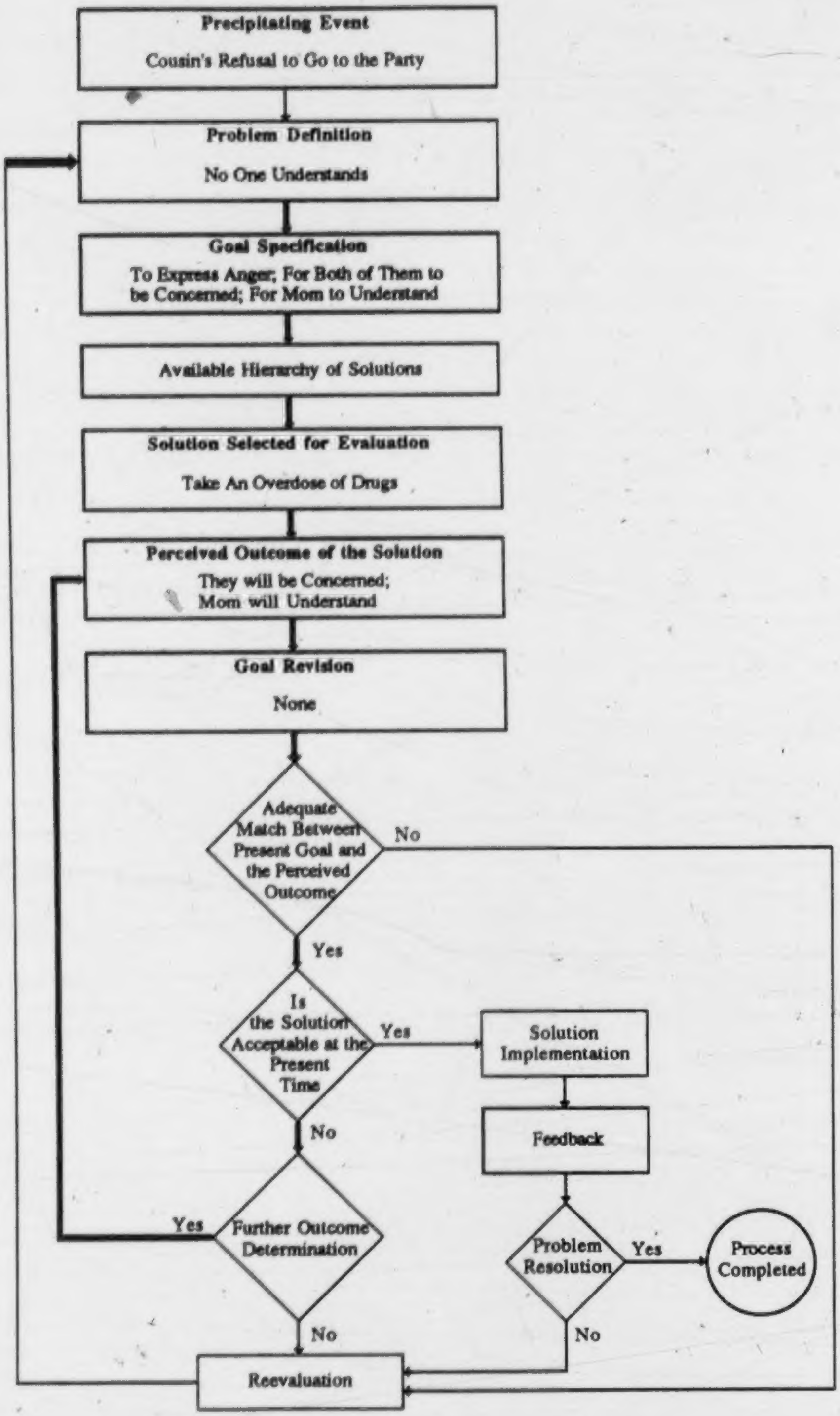
Precipitating Event
Cousin's Refusal to Go to the Party
Problem Definition
No One Understands
Goal Specification
To Express Anger; For Both of Them to be Concerned; For Mom to Understand
Available Hierarchy of Solutions
Solution Selected for Evaluation
Take An Overdose of Drugs
Perceived Outcome of the Solution
They will be Concerned; Mom will Understand
Goal Revision
None
Adequate Match Between Present Goal and the Perceived Outcome
No
Yes
Is the Solution Acceptable at the Present Time
Yes
Solution Implementation
Feedback
No
Yes
Further Outcome Determination
Problem Resolution
Yes
Process Completed
No
No
Reevaluation

Figure 14: Initial pathway for the solution "Take An Overdose of Drugs" (Case 1: Amy).

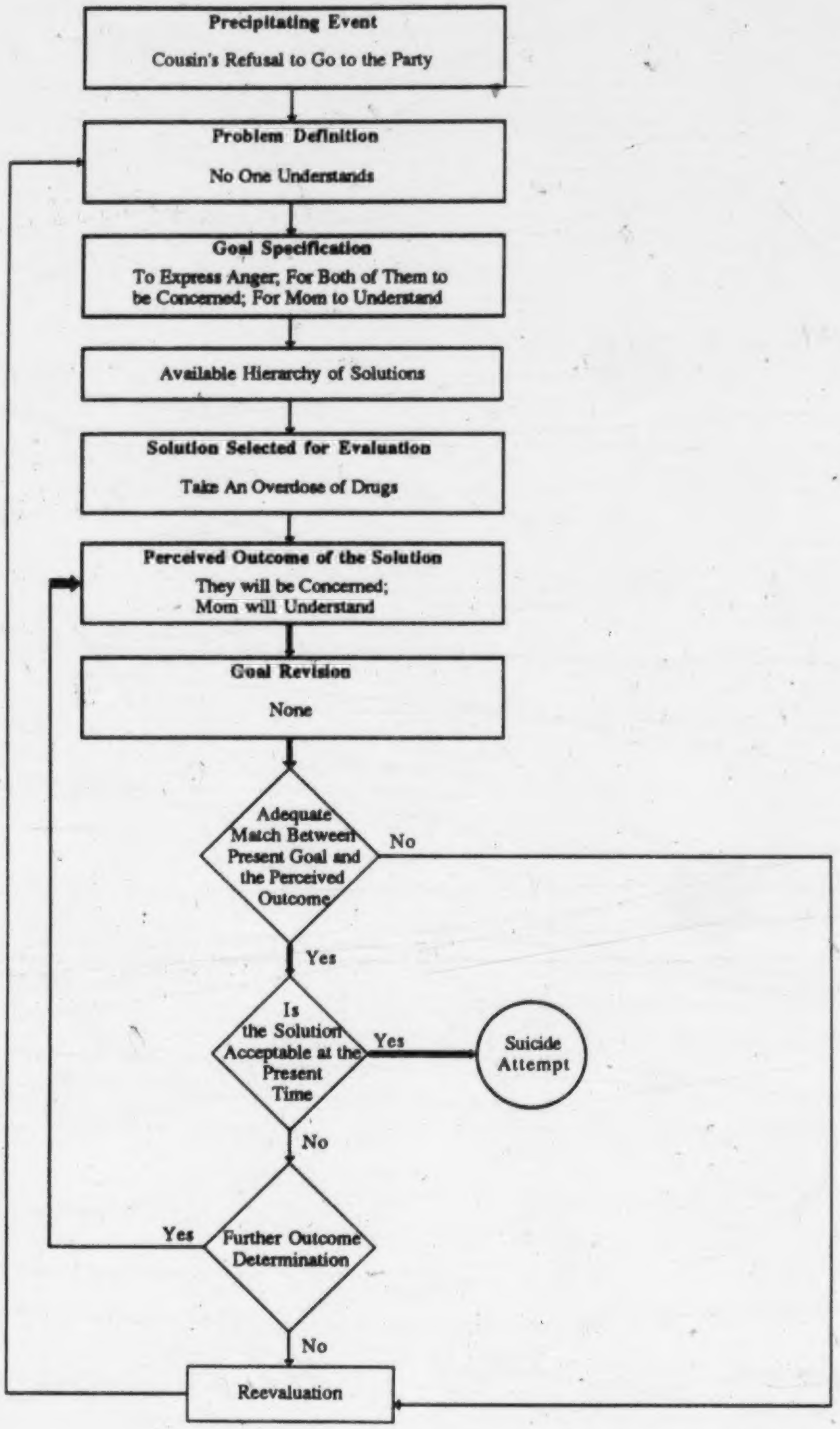
Precipitating Event
Cousin's Refusal to Go to the Party
Problem Definition
No One Understands
Goal Specification
To Express Anger; For Both of Them to be Concerned; For Mom to Understand
Available Hierarchy of Solutions
Solution Selected for Evaluation
Take An Overdose of Drugs
Perceived Outcome of the Solution
They will be Concerned; Mom will Understand
Goal Revision
None
Adequate Match Between Present Goal and the Perceived Outcome
No
Yes
Is the Solution Acceptable at the Present Time
Yes
Suicide Attempt
No
Further Outcome Determination
Yes
No
Reevaluation

Figure 15: Final pathway for the solution "Take An Overdose of Drugs" (Case 1: Amy).

upset she (a) usually talks to her mother, (b) writes down her feelings (which she stated she didn't do this time as she was too mad), (c) she talks to her sister (which she had tried), (d) she beats up her pillow, and (e) lastly she calls a friend to talk. Amy apparently needed to talk to someone but was unable to think of anyone at that time of night who would listen. She stated that she told her family and friends that she took the overdose "because I felt I had no where to turn". When asked why she thought some teenagers might attempt suicide without wanting to kill themselves, she responded, "because they can't talk to anyone". She also stated that at the time she was in the crisis situation she did not think of calling a crisis line, but that she probably would have called one if she had thought of it. In fact, when she was asked on the Help-Seeking Questionnaire if she felt she could call a crisis line if she was having problems with her parents or a boyfriend, she responded that she was 100 percent certain that she could call a crisis line and that the outcome would be positive.

Amy's lack of knowledge in terms of drug toxicity also had an impact on her decision to take the drug overdose. She stated that if they had talked about the consequences of taking an overdose in school she probably would have still thought about taking the drug overdose, but she would not have implemented this option.

Amy would not be considered a high risk for repeating the behavior because she indicated that she would never try anything like this again. She also commented on the negative outcome of the behavior. She stated, "I learnt my lesson. There's a lot you have to go through afterwards. . . . The charcoal stuff doesn't taste too healthy. . . I felt I hurt myself because it's me who had to suffer more than anyone". She also stated that since she took the drug overdose her cousin does not talk to her very much. However, she did obtain some positive outcomes following the overdose as she felt that her mother was treating her better.

B. Case 2: Sarah

Background

Sarah (person 09) was 20 years of age and the youngest in a family of four children. She appeared to be an active individual whose interests included skiing, skating, and aerobics. At the time of the interview she was employed in a semi-professional capacity.

Sarah appeared to be at a turning point in her life where she was outgrowing her friends. She had a stable job and aspirations, while her friends did not seem to look beyond drinking in the bar every Friday and Saturday night. As well, she had been having some conflict with her parents regarding moving into an independent living situation. She indicated that they did not understand why she would want to live on her own.

Family Relationships

Sarah described her parents' relationship as "incredible". She stated that they were "really close" and that she had never heard them argue. She described her relationship with her father as "really good". However, she felt that she had to compete with her brothers for his approval, and she believed that he did not give her as much credit because she was a girl. Sarah described her relationship with her mother as "really good". She stated that she got along "great" with the other members of her family except for one brother due to a long-standing conflict with his girlfriend. She described her family as close, and she stated that they communicated openly with each other.

Interpersonal Problem-Solving Approach

Sarah had a high self-efficacy toward problem solving and she appeared to have the ability to generate effective solutions to her problems and to carry them through.

This was supported by her responses to the Problem Solving Inventory and the Optional Thinking Test. Her responses to other measures also indicated that she had an internal locus of control and that she had a high self-efficacy toward help-seeking. Therefore, it appeared that Sarah had the ability to be an effective problem solver.

As well, Sarah's parents appeared to have modeled effective problem-solving techniques. She indicated that they made decisions by discussing the problem and looking at every possible angle. She had also been included in the problem-solving process as they asked for her input when making decisions or setting behavioral standards.

In terms of her actual behavior, Sarah indicated she resolved conflicts or arguments with others by talking to the person. However, she avoided dealing with anger. She stated that if she was angry with someone she would not tell him/her because she was afraid if she hurt the person, without a good enough reason for being angry, the person would intensify what he/she was doing. She also stated that she worried about what other people thought.

Sarah did not appear to use self-destructive behaviors to deal with problems. She reported she did not start drinking alcohol until she was 17 years of age, and that she tried hash once at age eighteen. She reported that she was a social drinker and rarely became intoxicated.

Social Support

Sarah indicated she had a network of individuals she could access if she had a problem. As well, if she had a problem she would have preferred to work it out with the help of someone, as she liked "to see what other people think". She stated that she could have gone to her sister for support under all circumstances, and that she usually went to her parents for help when she was under stress. She had one friend she could go to for support under all circumstances.

However, Sarah reported a reluctance toward seeking help from outside sources. She indicated she had a high self-efficacy for help seeking, but that she would not ask a person she did not know for help. This is because she "feels guilty asking people I do not know", and she worried "about what other people will think". She indicated that she would not call a crisis line for this reason.

Suicidal Models

A close friend of Sarah's sister committed suicide four years ago. She indicated that at the time she hated him for doing it because it caused her sister "so much trouble" and it "hurt so many people". She felt that he did not want to die, but that he was upset and made a rash decision.

Sarah also reported that she remembered watching a television episode of the show "Knots Landing" where an actress took an overdose of pills in response to a conflict with her boyfriend.

Precipitating Event

On the evening Sarah took the drug overdose she had been involved in a major conflict with her boyfriend. She confronted her boyfriend outside a bar where he was with another woman. He drove off with the other woman and left her without explanation. She went to his house to try and talk to him, but they fought and he called the police. She then went home.

Underlying Issue

When Sarah was 13 years of age her brother's girlfriend spread a rumour that Sarah was having an affair with her cousin who was estranged from his wife. She felt this issue had never been resolved. She reported that this conflict had caused her parents a lot of pain, but that the issue had always been avoided and no one would talk to her about it.

Also, Sarah wanted a good relationship like her parents' relationship, but she saw it as being unattainable. She stated, "I see how happy others are in their relationships". However, she saw herself "like my sister always getting hurt".

Options Considered

The following section discusses the options Sarah considered once she arrived home after leaving her boyfriend's house. The precipitating event in this situation was Sarah's fight with her boyfriend. In terms of the problem definition, the problem she was trying to deal with was her inability to get her boyfriend to talk to her. She indicated that the incident with her boyfriend, especially her inability to get him to talk to her, "brought up the problems with my relatives again". She stated that it made her feel the same way as when she was fighting with her brother over his girlfriend's rumours.

Figure 16 presents the pathway for the first option she considered, which was to "get drunk". Her goal for drinking the alcohol was to escape, as she hoped it would make her fall asleep. The problem was not resolved, as instead of falling asleep she just felt sick.

During the time she was drinking the alcohol she was trying to determine ways of getting her boyfriend to talk to her. She indicated that prior to taking the drug overdose she considered "phoning him, and going over to his house". However, it is believed she did not perceive the outcome of these options as being successful because she never implemented them. Figure 17 presents the pathway for these options.

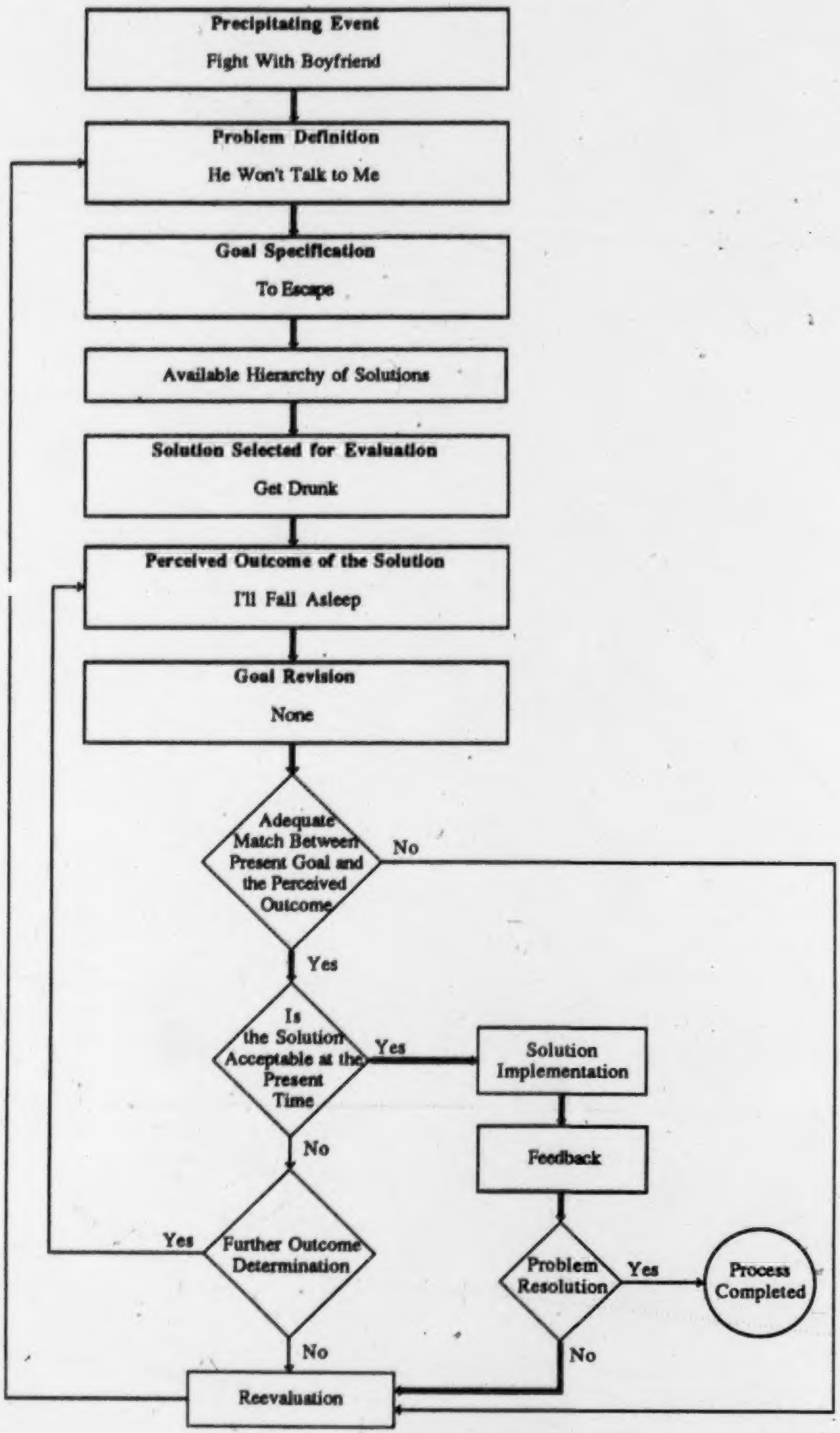
Precipitating Event
Fight With Boyfriend
Problem Definition
He Won't Talk to Me
Goal Specification
To Escape
Available Hierarchy of Solutions
Solution Selected for Evaluation
Get Drunk
Perceived Outcome of the Solution
I'll Fall Asleep
Goal Revision
None
Adequate Match Between Present Goal and the Perceived Outcome
No
Yes
Is the Solution Acceptable at the Present Time
Yes
Solution Implementation
Feedback
No
Yes
Further Outcome Determination
Problem Resolution
Yes
Process Completed
No
No
Reevaluation

Figure 16. The pathway for the solution "Get Drunk" (Case 2: Sarah).

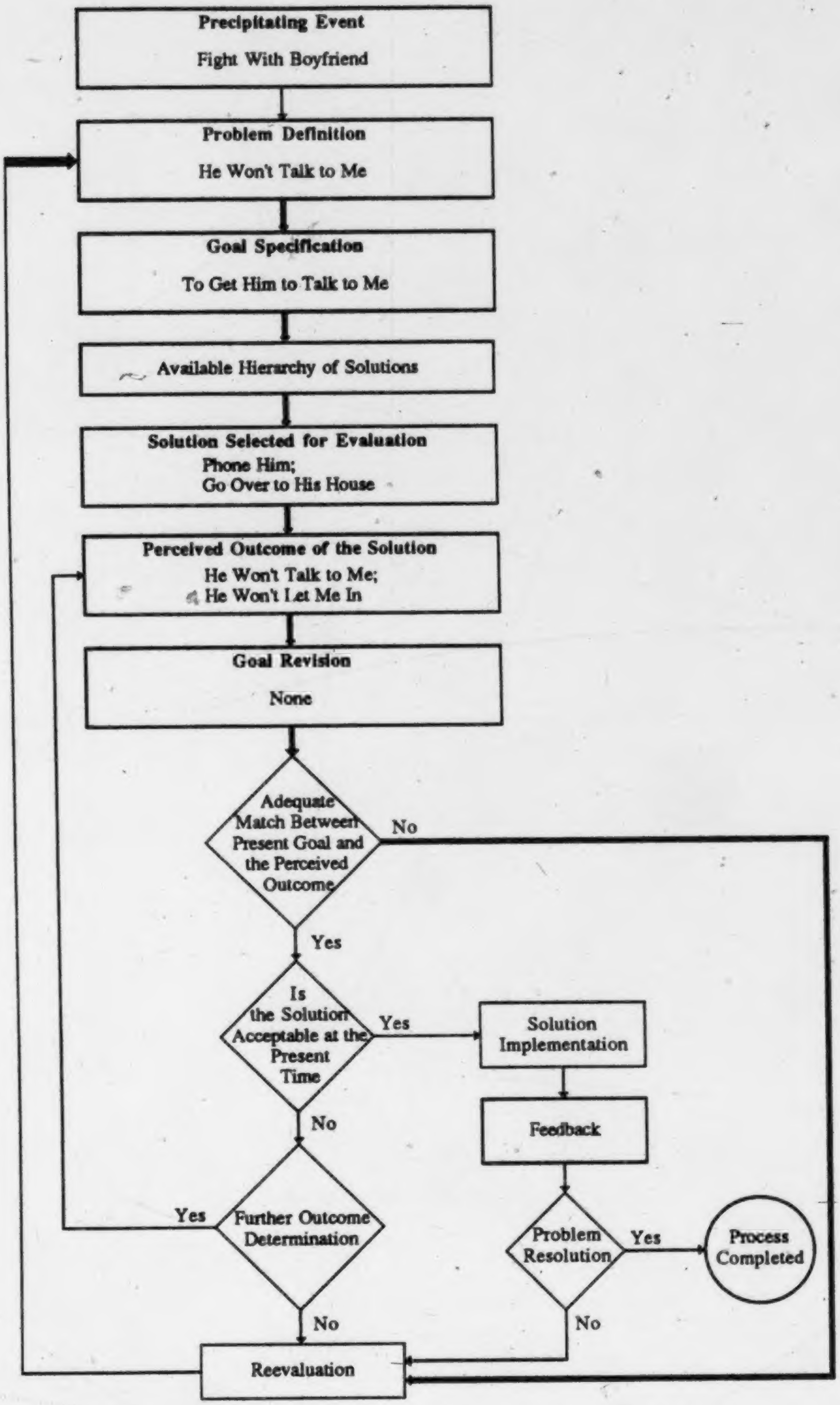
Precipitating Event
Fight With Boyfriend
Problem Definition
He Won't Talk to Me
Goal Specification
To Get Him to Talk to Me
Available Hierarchy of Solutions
Solution Selected for Evaluation
Phone Him;
Go Over to His House
Perceived Outcome of the Solution
He Won't Talk to Me;
He Won't Let Me In
Goal Revision
None
Adequate Match Between Present Goal and the Perceived Outcome
No
Yes
Is the Solution Acceptable at the Present Time
Yes
Solution Implementation
Feedback
No
Yes
Further Outcome Determination
Problem Resolution
Yes
Process Completed
No
No
Reevaluation

Figure 17. The pathway for the solutions "Phone Him; Go Over to His House" (Case 2: Sarah).

At one point Sarah became aware that she had a headache and she took two Tylenol tablets to relieve the pain. Approximately 15 minutes after taking the pills she looked at the Tylenol bottle on the table and impulsively took an overdose. She stated "it was like bang - gone before I knew it". Figure 18 presents the pathway for this option. It is hypothesized that the bottle of pills cued the model from the television show "Knots Landing" where a woman overdosed on a bottle of pills. This is hypothesized because she thought she would "die right away" because it would be like "I saw on T.V. where it worked real quickly". She stated the pills triggered the thought, "I want to be dead", and that if the pills had not been in front of her she probably would not have taken them.

In terms of the perceived outcome of taking the drug overdose, it is probable that she saw the outcome as being similar to the one experienced by the woman in "Knots Landing", where the woman ended up in hospital and received concern from her boyfriend. It is hypothesized that after she established what she perceived the outcome of taking a drug overdose to be, she revised her goals to include "escape" and "the realization he could lose me". Due to the impulsive nature of the drug overdose, it is recognized that this process was occurring extremely quickly.

Escape was seen as a strong motivation in the attempt, as she indicated she wanted to escape from an impossible situation and state of mind. When asked if at the time of the overdose she wanted to die, she responded she did want to die. She then clarified this by stating she would have liked to have been "out" for a couple of days. She had been in the hospital four months earlier due to an illness and she stated that her family was very concerned. Perhaps she thought she would again be hospitalized and receive some concern similar to the woman on "Knots Landing".

Interpersonal communication also played a strong component in the drug overdose, as when she was asked if she wanted to influence someone by the attempt, she responded, "I just wanted him to talk to me". She also indicated she

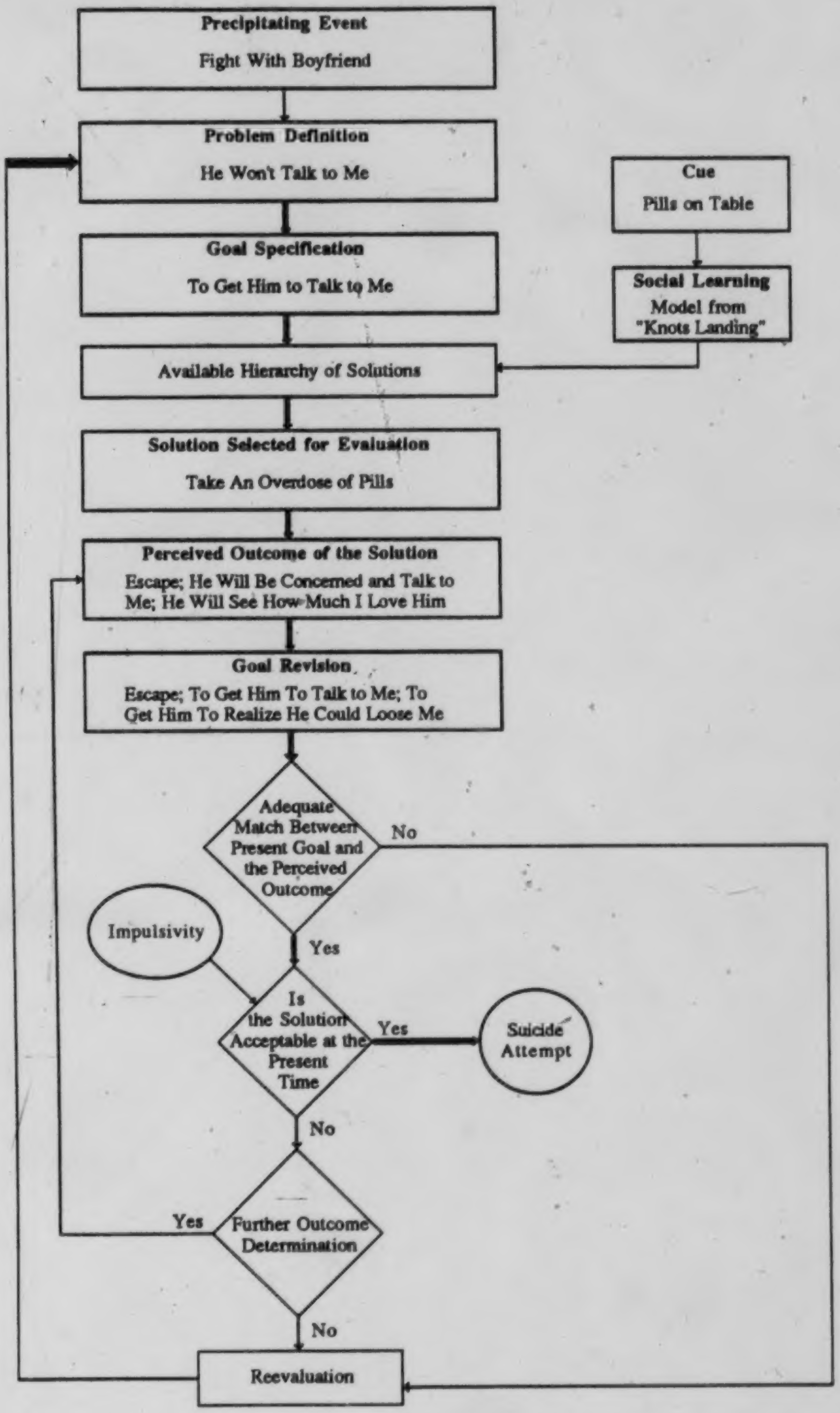
Precipitating Event
Fight With Boyfriend
Problem Definition
He Won't Talk to Me
Cue
Pills on Table
Goal Specification
To Get Him to Talk to Me
Social Learning
Model from "Knots Landing"
Available Hierarchy of Solutions
Solution Selected for Evaluation
Take An Overdose of Pills
Perceived Outcome of the Solution
Escape; He Will Be Concerned and Talk to Me; He Will See How Much I Love Him
Goal Revision
Escape; To Get Him To Talk to Me; To Get Him To Realize He Could Loose Me
Adequate Match Between Present Goal and the Perceived Outcome
No
Yes
Impulsivity
Is the Solution Acceptable at the Present Time
Yes
Suicide Attempt
No
Yes
Further Outcome Determination
No
Reevaluation

Figure 18: The pathway for the solution "Take an Overdose of Pills (Case 2: Sarah).

wanted to show how much she loved someone, she wanted to make people see how bad she was feeling, and she wanted to find out if she was loved by someone. She stated when she was taking the pills she was thinking "now he will know how much I love him".

In terms of mediating factors, the one the exerted that most influence in this case was impulsivity. If she had taken the time to evaluate the option she probably would not have taken the pills. She stated, "if it hadn't happened at that instant I probably wouldn't have done it". This is supported by the fact that immediately after taking the pills she realized it was a mistake and she went and asked for help from her sister. It is possible that she was influenced by the model from "Knots Landing" prior to taking the overdose, but that after taking the overdose she accessed the model of her sister's friend who had committed suicide. She stated that after she had taken the overdose she could not stop thinking about how her parents and family would feel.

In order to have used the model to facilitate with intervention, it would have been important to examine the motivation for the drug overdose in relation to the actual outcome. Sarah indicated that following the drug overdose she received concern from her family members, but she did not attain her goals with regards to her boyfriend. When she was asked about the reaction of her boyfriend to the "suicide attempt" she responded, "he didn't take it seriously and he didn't believe I was in the hospital". As well, he still refused to talk to her about their conflict. Unless Sarah was helped to come up with other ways of dealing with this problem she might have been at risk for making a more dangerous attempt to prove to her boyfriend that she was serious, and to obtain her unfulfilled goals. Her attitude toward attempted suicide also indicated that she might have been at risk for repeating the behavior, as it was relatively positive in relation to the comparison group's attitudes. It would have been helpful to determine if Sarah perceived the outcome of a more serious "suicide attempt" as matching her unfulfilled goals, and if so, to have then tried to help her find other means of achieving the same goals, or to have helped her redefine her goals.

In addition, from examining the factors that influenced the problem-solving process it appeared that there were two areas that Sarah needed to deal with. The first area involved the unresolved issue surrounding her family's refusal to discuss the rumours that were spread about her years ago. Her inability to resolve this problem is believed to have intensified her feelings in the present situation. The second area surrounded help-seeking. Even though she had a high self-efficacy towards problem solving and help-seeking, her reluctance to seek help from strangers might have prevented her from accessing an outside source to help her with the unresolved family issue, and might have continued to prevent her from seeking help with her current problem.

C. Case 3: Kathy

Background

Kathy (person 24) was chosen to illustrate the processes involved when a suicidal behavior is considered and rejected. She presented at the Emergency Department of the participating hospital for a post-operative check-up.

Kathy was 19 years old and the oldest in a family of three children. At the time of the interview she was enrolled in university, and was very active in "a lot of sports". She indicated she was an average student and her school history did not reveal any difficulties with her peers or teachers. Kathy reported she had never experimented with drugs, nor had she been involved in any illegal activities. She consumed alcohol 3-5 times per week and became intoxicated once per week.

Family Relationships

Overall, Kathy reported her family relationships were fairly positive. However, she revealed that her mother had a tendency to become moody at times which caused some tension in the family. She stated the major conflicts in the family were when her mother argued with the rest of the family over such issues as chores and meals.

Kathy described her parents' relationship as "fairly good". She stated though, that sometimes they argued when he "stands up for the kids". She described her relationship with her father as "very good" and her relationship with her mother as "good", but that it was "off and on". She stated that she got along "very well" with her siblings. When she was asked if she would describe her family as close, she responded, "yes, we help each other through everything".

Interpersonal Problem-solving Approach

Kathy indicated she was not an impulsive person when it came to solving problems. For example, her responses to the Barratt Impulsiveness Scale indicated that she saw herself as rarely doing things without thinking, and that she was always self-controlled. Also, the items she endorsed on the Problem Solving Inventory indicated that when she tries to solve a problem she takes the time to consider the chances of each alternative being successful, that she weighs the consequences of each alternative and compares them against each other, and that when she is confused by a problem she surveys the situation and considers all the relevant pieces of information.

In terms of the decision-making strategy used by family members, Kathy indicated when there was a decision to make her parents discussed it, and they included her in the process when the decision would impact on her. However, when it came to conflict resolution, problems appeared to be avoided. For example, she stated that her parents resolved their disagreements by her father ignoring her mother "until she resolves them herself". She stated the other members of the family resolved conflicts in the same manner.

Kathy resolved conflicts or arguments by "just forgetting about it". She also stated if she was angry with someone she would not let the person know because it was usually "over stupid things so it is not worth jeopardizing a relationship". In fact, her response to the fourth story on the Means-Ends Problem Solving Procedure, which involved a conflict with friends, indicated that the key person in the story was not to confront her friends with the problem, but instead she was to resolve the problem on her own. Therefore, it appeared that even though Kathy usually engaged in a vigilant problem-solving approach, when it came to conflict resolution she was more likely to choose to avoid the issue rather than to confront the person(s) involved.

Social Support

In terms of social support, Kathy reported she had a number of individuals she could go to for support under all circumstances including her father, her sister, and friends. She indicated that she would go to them for help if the problem was major, but that she would not ask for help with small problems. She also stated that she preferred to work out a problem on her own rather than with the help of someone as "I always like to do things my own way". Kathy had a high self-efficacy towards help-seeking, therefore this would not have prevented her from seeking help with a problem. However, her attitude regarding wanting to deal with problems on her own might have interfered with any help-seeking behavior.

Suicidal Models

Kathy reported that she had no personal contact with suicidal behaviors. She did recall seeing the movie "An Officer and a Gentleman" in which someone committed suicide.

Precipitating Event

Kathy had been sick during the previous year and felt depressed over the physical changes that had occurred. At one point in her illness she felt her friends did not seem to care enough about her. Kathy indicated she thought about attempting suicide to get people to care. In this analysis, the precipitating event will be the thought "no one seems to care".

Options Considered

As previously stated, Kathy's approach to problem solving appeared to be nonconfrontational, and she had a tendency to resolve conflicts or arguments by "just forgetting about it". Therefore, instead of talking to her friends about this problem, she would likely have tried to deal with it on her own, or tried "not to be alone but to go out and be with other people" so that she would not have had to think about the problem.

As stated earlier, Kathy indicated that one of the options she considered to make her friends care about her was to "attempt suicide". Figure 19 presents the initial pathway for this option. The precipitating event was that "no one seems to care" and the problem was defined as "my friends don't seem to realize how bad I am feeling". Kathy's goal in this situation was "to make my friends see how bad I am feeling and to make them care about me".

Kathy responses to some of the instruments indicated that she did not perceive the outcome of attempting suicide as death, but as "getting help and attention" and

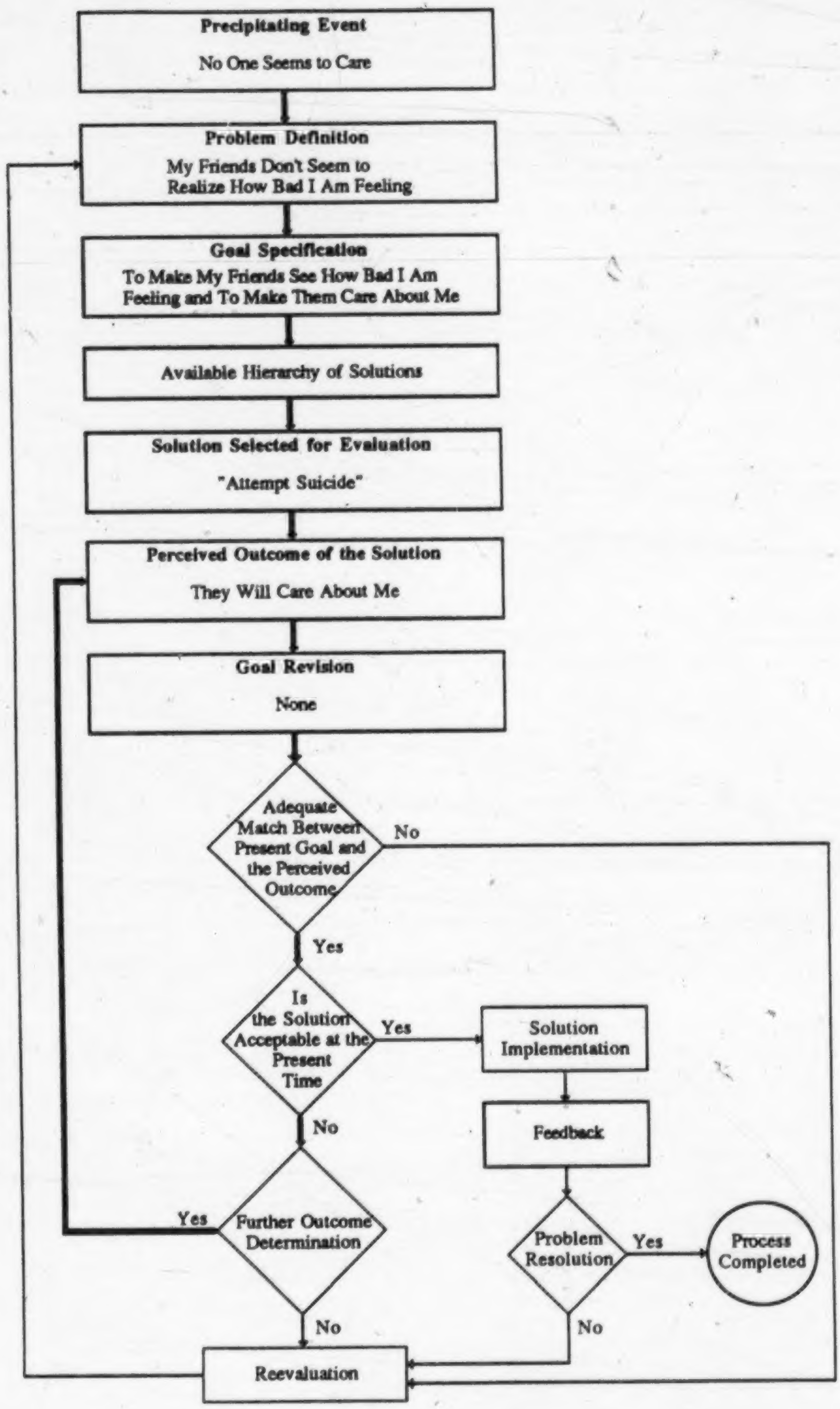
Precipitating Event
No One Seems to Care
Problem Definition
My Friends Don't Seem to Realize How Bad I Am Feeling
Goal Specification
To Make My Friends See How Bad I Am Feeling and To Make Them Care About Me
Available Hierarchy of Solutions
Solution Selected for Evaluation
"Attempt Suicide"
Perceived Outcome of the Solution
They Will Care About Me
Goal Revision
None
Adequate Match Between Present Goal and the Perceived Outcome
No
Yes
Is the Solution Acceptable at the Present Time
Yes
Solution Implementation
Feedback
No
Further Outcome Determination
Yes
No
Problem Resolution
Yes
Process Completed
No
Reevaluation

Figure 19. Initial pathway for the solution "Attempt Suicide" (Case 3" Kathy).

"making someone see how bad one is feeling". Kathy stated that when she initially considered attempting suicide, she felt that attempting suicide would result in the type of caring she wanted. However, she stated that after deliberating further on the outcome, she realized "I wouldn't get the response I wanted, but instead people might think I need help and send me off to a psychiatrist" (Figure 20). She also stated that a failed attempt might have resulted in physical damage. Even before she was asked about what she perceived the physical consequences of a drug overdose to be she stated, "I don't know what it would do to your body if you didn't die". Later on in the interview, when she was asked about the physical consequences of a drug overdose she stated, "it would be harmful to your body and life style . . . perhaps you wouldn't be able to have a family". As she was a very physically active person, the physical consequences seemed to be a very important factor for her to consider.

Kathy's ability to inhibit responding impulsively, and her vigilant problem-solving approach probably helped her in the decision not to attempt suicide as she was able to consider the possible outcomes of the behavior. When Kathy described why she decided against attempting suicide she stated, "I always weigh out solutions". Even though Kathy's knowledge regarding the physical outcome of attempting suicide did not seem to be based on any factual information, the fact that she perceived negative physical repercussions as a possible outcome would also have mediated against her having chosen attempted suicide as an option.

If Kathy had not perceived the outcome of attempting suicide as being negative, but to result in the type of attention she desired, there is the possibility that she might have chosen this option, as she had the most positive attitude toward attempted suicide of all the comparison group. In addition, other more adaptive solutions, such as talking to her friends about how she was feeling, would probably

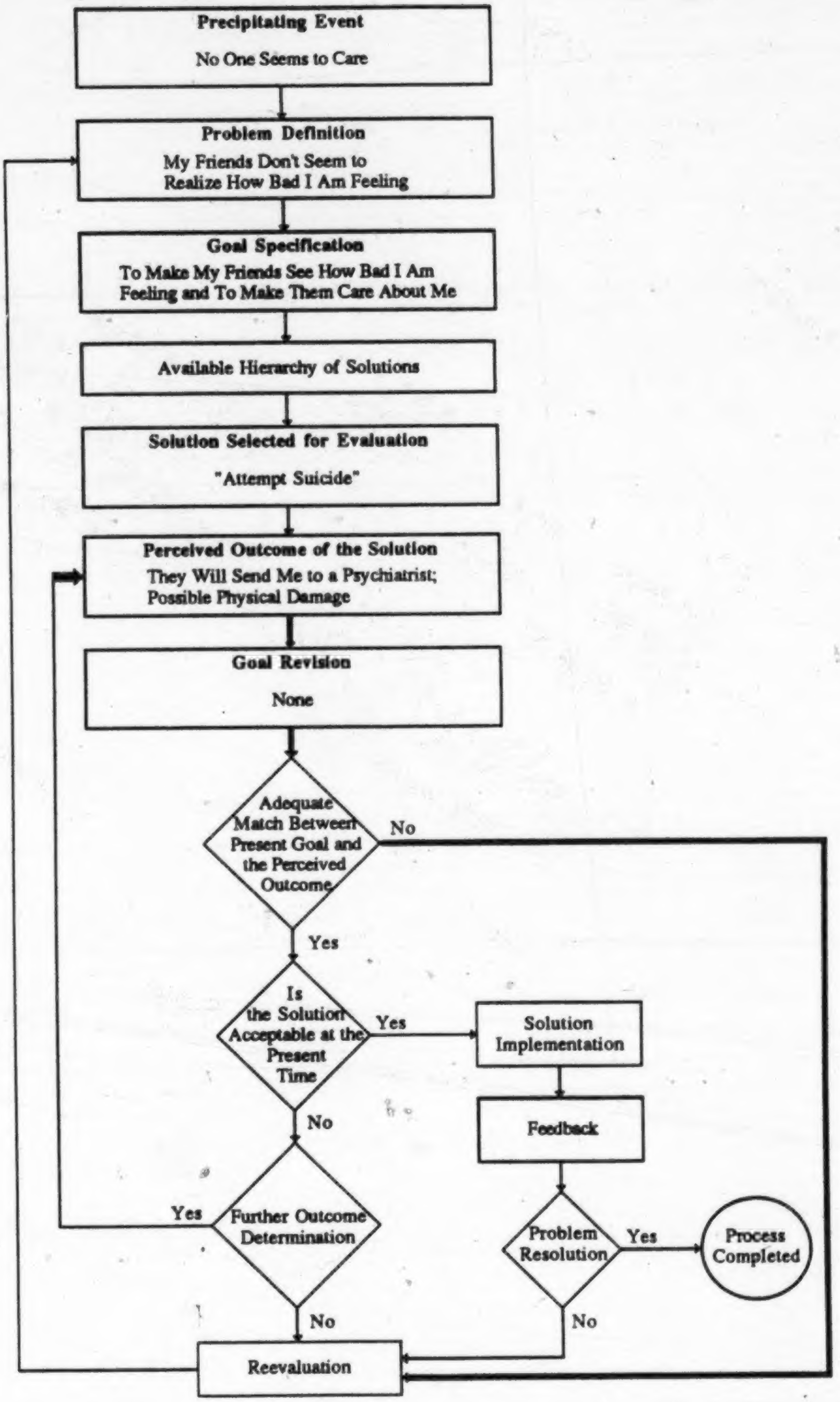
Precipitating Event
No One Seems to Care
Problem Definition
My Friends Don't Seem to Realize How Bad I Am Feeling
Goal Specification
To Make My Friends See How Bad I Am Feeling and To Make Them Care About Me
Available Hierarchy of Solutions
Solution Selected for Evaluation
"Attempt Suicide"
Perceived Outcome of the Solution
They Will Send Me to a Psychiatrist; Possible Physical Damage
Goal Revision
None
Adequate Match Between Present Goal and the Perceived Outcome
No
Yes
Is the Solution Acceptable at the Present Time
Yes
Solution Implementation
Feedback
No
Yes
Further Outcome Determination
Problem Resolution
Yes
Process Completed
No
No
Reevaluation

Figure 20. Final pathway for the solution "Attempt Suicide" (Case 3" Kathy).

have been rejected because she tended to avoid problems rather than confront people.

In summary, these three cases were presented to illustrate the different components of the model, and to provide the reader with a sense for how the model could be applied in a real situation. The final chapter will discuss the theoretical and practical implications of the model.

VIII. THEORETICAL AND PRACTICAL IMPLICATIONS

One of the objectives of this dissertation was to develop a social information-processing model that could be used to describe the processes involved in a decision-making situation where a suicidal behavior could be one of the options under consideration. This model was developed partly in response to research that implies that individuals engage in suicidal behaviors because they, as a group, tend to have certain characteristics that make them more likely to engage in suicidal behaviors as compared to non-suicidal groups, without offering explanations for the individual variation within the groups. For example, if a study finds that a group of parasuicides differ on a measure of problem solving, the decision to engage in the suicidal behavior is often attributed to the poor problem-solving abilities of the individuals without offering an explanation for the individuals within the parasuicide group who have good problem-solving abilities and the individuals within the comparison group(s) who have poor problem-solving abilities. This is not to imply that group findings are not relevant and that the only useful unit of analysis is at the individual level. However, there is a void in the literature regarding an explanation for those individuals who deviate from the overall trend(s).

In short, the model was developed as a framework for examining why some people attempt suicide in a crisis situation while others under similar circumstances do not, and to explain why some "low risk" individuals also engage in suicidal behaviors. Recent developments in social information processing provided a framework from which to discuss individual differences.

The intent of the model development was not to trivialize parasuicide by implying that a suicidal behavior is only the outcome of a faulty problem-solving process. For many individuals a suicidal behavior is the culmination of a long period of distress. As stated in chapter I, this model is meant to complement existing theories that hypothesize the processes that bring an individual to a suicidal crisis.

Why are adolescents more likely to choose parasuicide as a means of solving a problem as compared to other age groups? Perhaps, in part, it is related to the complexity of their schemata for dealing with crises that occur. According to the proposed model, only the solutions within activated schemata are available to an individual. These schemata are developed through social learning. Many adolescents have few life experiences to draw upon and, therefore, few resources to utilize when solving problems (Levenson & Neuringer, 1971).

It is unfortunate that for some individuals a suicidal behavior is perhaps the most appropriate behavior. It mobilizes people whereas before this might never have occurred. According to Maris (1971), suicidal behaviors could be "interpreted as coping mechanisms operating to preserve rather than cripple or end life" (p. 113). He argued that female suicide attempts can be conceived of as "partial self-destruction", the end result being to make life possible, not end it. Person 04 exemplifies this statement. She had been trying to cope with an extremely troubled background which included long-term sexual abuse by family members, drug abuse, and prostitution, but was unable to secure help. Her "suicide attempt" could be viewed as a desperate measure designed to demonstrate that she could not cope anymore. She stated, "I was trying to make someone realize I need help". According to Suter (1976), a suicide attempt, where a person does not fully intend to die, occurs when a person is despairing about her ability to cope but still has a hope of being helped by others. She stated that in this sense a suicide attempt is a "feminine act" according to society's standard, as it combines a feeling of personal helplessness with the concept of rescue by someone else.

How tragic that in our society the only way some people perceive they can change their life situation is to endanger their physical well-being, especially since nonfatal deliberate self-harm rarely signals any radical change for the better, and instead frequently indicates a worsening in their situation (Morgan, 1979). The present author believes that there must be other ways for adolescents in distressing situations to deal with their problems that do not involve behaviors that are destructive to themselves and to society. Preventive approaches are needed that focus on helping adolescents deal with life stress in non-destructive ways (e.g., Cohen-Sandler & Berman, 1982; Lafromboise & Bigfoot, 1988; Patsiokas & Clum, 1985).

A. Prevention

Using the proposed model as a framework, approaches aimed at reducing the incidence of suicidal behaviors will be discussed from the perspective of primary prevention, intervention, and postvention. Primary prevention is directed at individuals who have not yet attempted suicide. Intervention is concerned with the prevention of suicidal behaviors in a group at risk, typically those who have already made at least one suicide attempt (Clum et al., 1979). Postvention is usually discussed in terms of completed suicide, and refers to activities conducted after a suicide with family and friends of the deceased (Hill, 1984). In this study, the term postvention will be extended to include an intervention following a suicidal behavior.

Primary Prevention

Due to the increase in the youth suicide rate, attention has focused on the role of the educational system in suicide prevention (Griffin & Felsenthal, 1983; Grob, Klein & Eisen, 1983; Hill, 1984; Madison, 1978; Mortensen, 1985; Mulder, Methurst, & Diekstra, 1989; Ross, 1980, 1981; Wekstein, 1979). With the recent resurgence of research examining the effect of the media on suicidal behavior, there have been those who have cautioned against discussing suicide prevention in the classroom due to a fear of the uses the adolescent may make of the information. Hawton and Catalan (1987) stated that "some people might decide to take an overdose as a result of learning about it through the media or public discussion, even if the behavior had been presented as an inappropriate way of coping" (p. 180). Diekstra (1989b) stated that there is the danger that suicide education "might be counter productive because they might not only provide information of suicidal behavior, but also provide models for that behavior" (p. 31).

However, many authors (e.g., Allen, 1982; Klagsbrun, 1976; Mortensen, 1985; Ross, 1985; Sartore, 1976) have emphasized the need to educate adolescents in suicide prevention. This focus has arisen partly from the awareness that adolescents are more likely to turn to a friend if considering suicide than anyone else. In fact, Ross (1985), upon surveying high school students as to whom they would tell should they ever consider suicide, found that in 91% of the responses "friend" was selected as the first choice. Unfortunately, most adolescents are unprepared to be placed in the role of rescuer. They need to be provided with the knowledge and tools to deal with life-threatening situations when they are encountered.

While the need to provide information to adolescents regarding suicidal behaviors is recognized, as stated earlier there are those who would argue that suicide prevention classes must be undertaken with caution. Keeping both perspectives in mind, the proposed social information-processing model will be used as a basis for making recommendations regarding prevention activities. An examination of the proposed model revealed four locations in the problem-solving process that could have a bearing on whether or not a suicidal behavior would be implemented. This information could be used to help circumvent a suicidal behavior and, therefore, would have implications for prevention activities. Annotations on Figure 21 (A - D) highlight these locations and they are described below:

1. The first location in the problem-solving process (A) is at the stage "Available Hierarchy of Solutions". If the solution "attempt suicide" is not in an

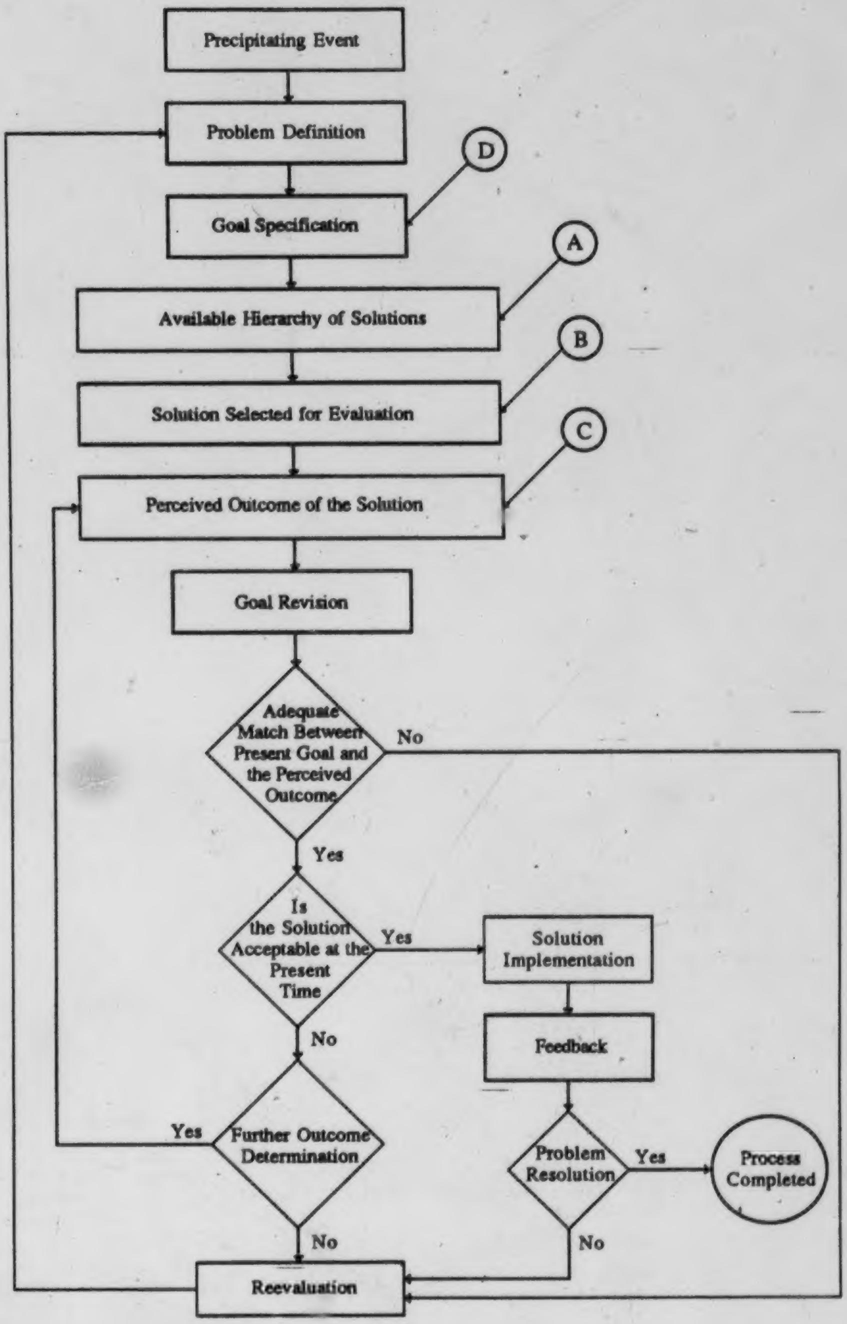
Precipitating Event
Problem Definition
Goal Specification
D
A
Available Hierarchy of Solutions
B
Solution Selected for Evaluation
C
Perceived Outcome of the Solution
Goal Revision
Adequate Match Between Present Goal and the Perceived Outcome
No
Yes
Is the Solution Acceptable at the Present Time
Yes
Solution Implementation
Feedback
No
Yes
Further Outcome Determination
Problem Resolution
Yes
Process Completed
No
No
Reevaluation

Figure 21. Locations in the problem-solving process that could have a bearing on whether a suicidal behavior would be implemented.

individual's available hierarchy, then this solution cannot be selected for evaluation and the behavior will not be implemented.

2. The second location (B) is at the stage "Solution Selected for Evaluation". Even if the solution "attempt suicide" is in an individual's available hierarchy, it will not occur if it is not selected for evaluation.

3. If the solution "attempt suicide" is selected for evaluation, it is the "perceived outcome of the solution", location C, that will be the crucial factor in determining whether the option will be implemented. If the perceived outcome of "attempt suicide" does not match the individual's goals, then it will not be implemented.

4. If the solution "attempt suicide" is selected for evaluation, and it is the only solution that matches the person's goal(s), then unless the person changes her goals (location D) the solution is likely to be implemented.

The implications of these stages for prevention will be discussed in the subsequent sections.

With regard to the first location on the model, "Available Hierarchy of Solutions", if the solution "attempt suicide" is not in an individual's activated schemata, then the behavior will not occur. Consistent with the previously mentioned concerns (Hawton & Catalan, 1987; Diekstra, 1989b), it is recommended that when providing suicide information to adolescents, the information should be presented in a factual manner and the focus should not be on why suicidal behaviors occur. As stated earlier, the most frequent precipitating event to a suicidal behavior in adolescents is a fight with a parent(s) or a boyfriend/girlfriend. If the discussion focused on why adolescents attempt suicide, schemata involving relationship problems would likely be activated. Instead, the focus should be on how to obtain help if feeling suicidal, and how to assist someone in a suicidal crisis. An attempt should be made to activate "help-seeking" schemata when teaching this information, not schemata that are likely to be accessed during interpersonal difficulties.

Many suicide prevention classes include video enactments of suicidal behavior for the students to observe and then later discuss. The use of some audiovisuals could provide unintended and disconcerting outcomes. Taylor and Crocker (1981) stated that anticipating how an event might have come about would make a cause-effect linkage salient, and this would remain salient even after the outcome is discredited. If a class is shown a film in which a suicidal crisis is enacted, this might cause individuals within the class to process this information in an attempt to try and determine the cause of the behavior. Later discussions regarding other options the individual might have tried may not break the link, and this behavior might then be more accessible, especially if it is processed within a schema that is likely to be activated in a crisis situation. According to Sherman and Corty (1984) "it has been demonstrated how a single striking instance can affect attitudes while pallid statistics have little or no effect . . . It is likely the enhanced availability and memorability of detailed single case information that makes it so important in the judgment process (p. 214). As well, highly salient (e.g., vibrant, colorful, dramatic) details result in stronger memory traces (Taylor & Crocker, 1981). One would suspect that producers of these movies are attempting to make them vibrant, colorful and dramatic, and consequently the movie itself might be remembered more than the ensuing discussion. From examining Figure 21, it is apparent that if the solution "attempt suicide" is not in an individual's available hierarchy of solutions, then it cannot be selected for evaluation and it will not be implemented. Therefore, not only could the viewing of some movies place the solution "attempt suicide" in schemata that are likely to be activated in a crisis situation (location A), the movies might also make the solution highly available thus increasing the probability that it will be selected for evaluation (location B).

In addition to providing information to adolescents, another prevention approach would be in the direction of health promotion. Health promotion "is the process of encouraging and assisting individuals to adopt healthy lifestyles" (Thompson, Skirrow, & Nutter, 1987, p.1). It is the "maintenance and enhancement of effective programs, services and policies" (Goodstadt, Simpson, & Loranger, 1987, p. 12). This approach has been alluded to by many writers over the past two decades. For example, Diekstra (1985) stated that in his opinion the priority for suicidology should be to "help to prevent the option of suicide behavior appearing as a desirable one so early in the life cycle of the individual" (p. 41). Hawton, Cole, O'Grady, and Osborn (1982) suggested that attention to the modification of the attitudes of young people to self-poisoning and to seeking help when problems are beginning, rather than when a crisis occurs, is likely to be a more effective approach to prevention. Sale et al. (1975) stated that a profitable approach to primary prevention may "lie in the alteration of subcultural attitudes to suicide behavior, and in increasing community awareness of more appropriate and less disruptive modes of coping" (p. 159).

One health promotion approach, which might reduce suicidal behaviors, would be to teach adolescents problem-solving skills (e.g., Cohen-Sandler & Berman, 1982; Hains, 1984; Patsiokas & Clum, 1985). Some adolescents are not aware of the choices they have in their everyday situations, and they might benefit from being taught how to recognize and evaluate these choices. This is exemplified by the comments of an adolescent who participated in a research project described by Hess (1984). Hess presented elementary and junior high school students with ten short written scenarios describing everyday events. They were asked to select what they would do in each of the situations from a list of possible responses. A grade 9 student's comments following the completion of the task were as follows:

> That thing we did was really interesting. It really made me think because I never realized before that I had a choice in what I did when things bothered me. I was really quiet during the class discussion not because I wasn't interested

> but because I was thinking of all the times when I could have done something different -- it might have worked out better. (p.161)

According to Davis (1983), by "learning how to solve problems, children learn they have control and power over their lives" (p. 52).

Some recommended approaches to increasing problem-solving skills in adolescents involve teaching general problem-solving strategies such as those based on D'Zurilla and Goldfried's (1971) work (e.g., Patsiokas & Clum, 1985). However, as stated in chapter II, there is still a debate as to whether these strategies will transfer to real life situations, especially "hot" situations (cf. Hains). In fact, the majority of individuals from the present study indicated that in emotional situations they do not function in a rational manner, with 100% of the individuals in the parasuicide group and 60% of the individuals in the comparison group endorsing the following item from the Problem Solving Inventory: "Sometimes I get so charged up emotionally that I am unable to consider many ways of dealing with my problems". As well, seven individuals from the parasuicide group and five from the comparison group gave some degree of endorsement to the statement: "When confronted with a problem, I tend to do the first thing I can think of to solve it". Returning to Figure 21, the option "attempt suicide" will not be selected for evaluation (location B) if other options are more available that fulfill the goal requirements and, therefore, a solution is implemented before a suicidal behavior is considered. One goal of teaching problem-solving skills would be to expand the number of options individuals have available for use in difficult situations.

It is recommended, therefore, that problem-solving skills be taught within the context of many different situations that are likely to lead to a suicidal behavior, instead of in a general context. Using this approach, in the process of teaching problem-solving skills, a repertoire of options and ways to handle aberrations that may occur will be placed within different schemata so that even under "hot" conditions these options will likely be available. Schema theory provides a rationale for focusing on more than one situation, as according to this theory, options within one schema might not transfer to another schema. For example, person 10 indicated that she never thought of calling a crisis line when she was fighting with her mother, but that she probably would have called a crisis line if she had thought of doing so. She was aware that crisis lines exist, but this option was probably in another schema that was not activated at the time.

In addition, even though an adolescent might have the skills to effectively solve a problem, other factors could mediate between competent social cognizing and the actual production of social behaviors (Rubin & Krasnor, 1986). In chapter VI, a number of mediating variables were discussed that could inhibit the choice of more adaptive behaviors. These mediating variables could have an impact on locations B and C as previously identified on Figure 21. The mediating variables of self-efficacy, locus of control, attitudes, and affect could result in the rejection of adaptive options, thus increasing the chance that a suicidal behavior would be selected for evaluation. For example, person 10 stated that one of the solutions she usually tries when she is upset is to "write down my feelings". She indicated that she rejected this option during the situation that lead up to her suicide attempt noting that "I didn't do that this time as I was too mad". The mediating variables impulsivity and knowledge are believed to have the most impact at location C as illustrated by person 09 and person 10. Person 09 indicated that she would not have taken the drug overdose if she had not responded impulsively and had taken the time to adequately evaluate the outcome. Person 10 stated that she would have still thought of taking the drug overdose, but that she would not have actually carried through with it if she had the knowledge of the dangers involved.

Another health promotion technique would be to focus on these mediating variables through, for example, having individuals practice different ways of dealing with negative emotions such as angry feelings, through breaking down resistance toward help-seeking by role playing help-seeking situations, and through fostering positive attitudes toward help-seeking.

In summary, one goal of primary prevention would be to teach individuals problem-solving skills, and to provide them with a repertoire of options that could be accessed under a variety of situations so that they feel they have the power to deal with the stresses in their lives. The proposed model could be used as a pedagogical teaching tool to assist individuals in understanding the problem-solving process, and to illustrate how mediating variables could impact upon rational decision making.

Preliminary studies indicate that teaching psychosocial skills to the young has a positive overall effect in terms of their social competence, problem-solving skills, and skills in coping with emotional disturbance. However, little is known about the effect of this approach on self-destructive behaviors (Mulder et al., 1989). It is hypothesized that one outcome of teaching psychosocial skills within the theoretical framework outlined in this dissertation would be the reduction of suicidal behaviors.

Intervention

Suicidal behavior could be viewed as an operant which in some instances is reinforced and maintained by the consequent interpersonal manipulations that follow the behavior. Suicidal behavior may be increased by traditional intervention procedures and the immediate response of the environment (Bostock & Williams, 1974, 1975; Sifneos, 1966). Frederick and Resnik (1971) stated that paradoxically, the behaviors of physicians, mental health professionals and suicide prevention centers may reinforce suicidal behaviors. They contended that when the "cry for help" results in a real or fantasized change in the person's relationships and/or environmental surroundings, the suicidal behavior may be learned as a successful method of coping.

The reinforcing aspects of parasuicide may explain why the base rate for future suicide attempts in the year following the index attempt has been estimated at between 16% and 50% (Clum et al., 1979). According to Clum et al. (1979) "once engaged in, parasuicide becomes part of a person's behavioral repertoire and greatly increases the probability that such behavior will be engaged in when stress is encountered" (p. 938). Morgan (1979) stated that deliberate self-harm can become a self-perpetuating process and that once a person has engaged in this behavior, the risk of repetition is immediately increased and the behavior becomes increasingly difficult to influence. For example, one of the individuals in the parasuicide group was hospitalized following her suicidal behavior due to complications in her living situation. She reported that when the hospital staff indicated they were going to discharge her, she slit her wrist in an attempt to extend her hospital stay.

The position espoused in this dissertation has implications for helping caregivers evaluate an individual and develop a treatment plan following a suicidal behavior. The proposed model could be used as a framework for guiding questions and directing intervention activities.

To begin with, when evaluating an individual following a suicidal behavior, the caregiver should assess the individual's goals and motivation for the attempt. According to Hawton (1986), our understanding of suicidal behaviors will not be complete if our attention is focused only on the problems and precipitants that have led to the suicidal act. He stated that the motivational aspects of suicidal behaviors, defined as the intention behind the behavior, should be examined. If the behavior produced the desired goal, then the individual might be at greater risk for future attempts, especially if the individual's current attitudes regarding the behavior were positive.

A determination should be made of why more adaptive options were not chosen in the crisis situation. For example, was the behavior chosen because (a) the individual had a lack of options and, therefore, did not know what else to do; (b) the behavior was impulsive and the decision to engage in a suicidal behavior would not have been made if more time had been taken to deliberate on the outcome; and (c) other mediating variables affected the choice, such as low self-efficacy or a negative attitude toward help-seeking.

In terms of intervention, it is too late to have an impact at location A in Figure 21, as the solution is obviously already in the individual's repertoire and it would be difficult to remove it. The goal, therefore, should be to focus on the remaining locations. One approach would be to reduce the probability that a suicidal behavior will again be selected for evaluation (location B) through altering its position in an individual's hierarchy within the schemata that are likely to be accessed. One means of decreasing the position of the option of a suicidal behavior would be to provide the individual with a repertoire of more appropriate options, consequently increasing the probability that one of them would be chosen before a suicidal behavior is considered (cf. Rotheram, 1987). Restructuring of a schema takes place most readily when the relevant schema is fully activated (Safran & Greenberg, 1986). Providing information in a manner that would be colorful, novel, distinctive, or otherwise salient would make it more available (Taylor & Crocker, 1981). In terms of helping the individual to find other ways of achieving her goals, it would be beneficial to have her rehearse more adaptive means of achieving them. "In a clinical context, one should be able to produce desired behavioral changes as well as thought and affect changes by having clients cognitively rehearse adaptive scripts" (Anderson & Godfrey, 1987, p. 254). Another approach to altering the position of attempted suicide in an individual's hierarchy would be to change the perceived outcome of attempted suicide (location C) through focusing on the negative consequences of the behavior and minimizing any reinforcing outcomes.

If some of the individual's goals were unattained, these goals should be examined to determine if they could be attained by more appropriate means. If a suicidal behavior is the only means of achieving specific goals, then the caregiver should help the person to reevaluate these unattainable goals (location D). Perhaps by reframing the situation such that the individual accessed a different schema, a new goal hierarchy would be revealed. For example, person 09 did not satisfy her goal of getting her boyfriend to talk to her. This was still a goal she felt she needed to obtain. If the situation was reframed such that she realized her need to talk to her boyfriend was related to her family's refusal to discuss the rumours that were spread about her years ago, the problem would be redefined and new goals would be revealed. These goals might be easier to attain through more conventional means.

In summary, in addition to helping the individual resolve the factors that contributed to the decision to engage in the suicidal behavior, a treatment plan should involve providing the individual with other means to obtain her goals or to help her change her goals. According to Smith and Pollack (1978), unless other methods of coping are available and feasible to a person who engages in deviant behaviors, she can be neither punished nor persuaded out of, or away from, her unacceptable conduct. Most people, who engage in self-destructive behaviors, recognize that their behavior is personally destructive and may be socially harmful. People deviate because "society places great stresses on every individual; when those stresses become too great, he makes adjustments in his conduct, adjustments which may, from a medical, psychological, or sociological standpoint, be highly unsatisfactory but which may nevertheless be the best he can achieve at that particular point" (Smith & Pollack, 1978, p.15).

Postvention

An obvious consequence of the increase in suicidal behaviors in the young is that more and more young people have suicidal models within their social learning history. The response of the environment following a suicidal behavior provides an indication to others of the possible outcomes of the behavior, and may teach that a suicidal behavior is a powerful means of achieving specific goals.

Opponents of postvention following a suicide attempt could argue that postventive work might reinforce the behavior, and consequently be considered antitherapeutic. Proponents of postvention could argue that there may be a need to alter any perceived positive outcomes of the behavior in order to decrease the probability that others would engage in the behavior. Keeping these positions in mind, the following are some suggestions regarding postvention in the context of the school and family settings. However, research is needed to evaluate the efficacy of interventions following a suicidal behavior.

Within the school setting, the fact that a suicidal behavior has occurred will often not be known beyond the level of a few students and, therefore, the school system cannot make a response. Even if some school personnel are aware that the behavior has occurred, if the students are not making the parasuicide an issue, it is probably best not to deal with it on a formal level due to the chance of activating specific schemata during the discussion (location A), and due to that chance of reinforcing the behavior (location C).

Occasionally, a suicidal behavior by an adolescent will be the focus of discussion amongst fellow students. At this point the behavior will probably be within the hierarchies of specific schemata (location A) and it would be wise for the homeroom teacher or an expert counsellor to defuse the situation. There may be a need to alter the perceptions regarding the perceived positive outcomes of the behavior (location C). One approach would be to discuss the possible short-term and long-term negative consequences of the behavior from both a physical and emotional perspective. Other means to more appropriately achieve the same goals should then be explored (location B).

The involvement of caregivers in postventive work within a family setting may also be appropriate. If a sibling attempts suicide, and other siblings see a positive response from the environment, they also may consider parasuicide as a viable option. For example, person 10 stated that following her drug overdose "things have really changed a lot - things are getting better". She stated that her mother was really scared and upset by the drug overdose and that now her mother does not "take everyone else's side when I'm right". The response of the environment in this case would demonstrate to any siblings that a suicidal behavior can have powerful results. In situations where there are siblings, it is recommended that caregivers emphasize to parents that they should not reinforce the behavior by treating the person who engaged in the suicidal behavior differently than the other family members (location C). As well, caregivers should help family members find less destructive ways of expressing their needs and solving their problems (location B).

In summary, if an individual is aware of parasuicide as an option, it is the expected outcome of this behavior that will be the crucial factor in determining if during the problem-solving process this option is chosen as a solution in a crisis situation. A suicidal behavior is chosen in a given situation "when the individual has socially learned to expect this behavior to lead to the preferred outcome in that situation" (Diekstra, 1974, p. 66). If the behavior is not perceived as leading to the preferred outcome, then it will not be chosen. For example, person 29 would be considered a "high risk" for engaging in a suicidal behavior based upon her personal history which includes a dysfunctional family and many self-destructive behaviors. However, she did not perceive attempting suicide as leading to any positive outcomes. She would be unlikely to engage in this behavior unless new information altered her perceptions regarding the outcome of the behavior.

Therefore, one approach that would be applicable at all levels of prevention would be to alter the perception that a suicidal behavior is the best means of obtaining desired goals by teaching other means of achieving the same goals, and if necessary, by focusing on possible negative outcomes of suicidal behavior.

B. Suggestions for Future Research

Bagley and Ramsay (1985) outlined 20 research priorities, which will not be reiterated here, but that are greatly needed in the area of suicidology and would facilitate other research endeavors. Of utmost importance is the collection of adequate statistics on all forms of suicidal behavior. Without this information it will be very difficult to evaluate the outcome of any prevention activities.

One important contribution of this dissertation was the application of social information processing to the field of suicidology. Future work is needed to determine the usefulness of this approach from both theoretical and practical perspectives. Recommendations for future research are as follows:

1. This model was not intended to be a predictive tool, but a framework from which to explore individual differences and to direct prevention activities. The model could be evaluated by having caregivers working with individuals who have engaged in a suicidal behavior determine if they can use the model to recreate the problem-solving process, and determine if the process of using the model facilitates decisions regarding treatment.

2. In the previous section, a number of recommendations regarding teaching problem-solving skills to adolescents were made based upon the framework of the proposed model. A pilot project should be designed whereby these

recommendations are implemented in school settings, and an evaluation of the impact on the parasuicide rate should be assessed.

3. The development of this model was, in part, derived from information obtained from a group of adolescents who had taken a low lethality drug overdose. This model could also be extended to other high-risk groups, such as the native population, to determine if it is still applicable. Natives are at especially high risk from the perspective of this framework because (a) often they have been exposed to many suicidal models within their social network, (b) there is a high incidence of alcohol use in the native population and alcohol functions as a disinhibitor, and (c) natives often have few options for changing their situation (Mortensen & Tanney, 1988).

4. In chapter V, the existence of a "fight script" was hypothesized. Research is needed to verify the usefulness of this construct through first determining if it is possible to develop a generic fight script. Scenarios to be studied could include a fight with a boyfriend/girlfriend; a fight with a parent, especially in a powerless situation (i.e., the individual feels that she will never change her parent(s)' mind); and a fight with a friend. Obstacles could be incorporated to explore subroutines for dealing with aberrations that may occur.

5. If a fight script can be successfully identified, the next step would be to examine the options within individuals' scripts for resolving fight situations, and to compare these to the options individuals perceive as having available for dealing with a suicidal crisis. A determination could be made of the extent of the overlap between the response options that occur in a suicidal situation and those that occur in a fight situation.

6. Research should be carried out to examine the schemata that are activated when someone makes a decision to engage in a suicidal behavior. It would be useful to determine if the majority of individuals who engage in parasuicide consider themselves suicidal, or if they see themselves as responding to a conflict situation.

If an individual does not consider herself suicidal, adaptive options within her suicidal script would not be available to her.

7. As stated in chapter VI, there has been a debate regarding the effects of media models on subsequent suicidal behaviors. A weakness with the published research is that an attempt has not been made to determine if the individuals who engaged in suicidal behaviors during the study period even watched the program of interest (cf. Davidson, 1989). It is difficult to measure this variable in the case of completed suicide. However, in terms of parasuicide it would be relatively easy to design a study in which individuals who engaged in parasuicide were asked if they remembered watching a media presentation of suicidal behavior.

8. The inability or reluctance to seek help might be an important factor in suicidal behavior. The data from this study indicated that possible barriers to help-seeking could be due to low self-efficacy toward help-seeking, or due to an attitude regarding having to be strong and independent. Research that focuses on barriers toward help-seeking in an adolescent population would be valuable.

9. In chapter VI, the possibility of an individual having both positive and negative "attitude clusters" toward an object was hypothesized. It is recommended that a study be designed to determine if it is possible to identify both positive and negative attitudes of individuals toward suicidal behaviors through the structuring of situations that would cue these attitudes. An extension of this research would be to determine if the accessibility of these clusters change with age. It is possible that younger individuals are able to access both clusters with ease, but that as a person becomes older the pathways to one cluster become stronger and, therefore, the other cluster is less likely to become accessed.

10. As suggested in chapter VI, positive attitudes following a suicide attempt might make an individual more likely to repeat the behavior. A longitudinal study designed to examine the relationship between attitudes toward attempted suicide

following a first suicide attempt and subsequent suicide attempts would provide important information with regard to predicting individuals at future risk for repeating a suicidal behavior, and would offer a direction for intervention.

11. Parasuicide could be used by some individuals as an escape and/or as a means of interpersonal communication. The problem arises when a completed suicide, instead of a social response, occurs. According to McIntire and Angle (1981), it is ironically tragic that many of the adolescent suicide deaths are unintentional. That is, the adolescents did not intend to die, but were victims of pharmacologic roulette. As stated in chapter VI, many authors have mentioned that adolescents are unaware of the toxicity of drugs. Person 10 stated that if she had known the dangers involved in taking the pills she would probably have still considered taking an overdose, but would not have implemented this option. A study that examined the impact of providing accurate knowledge of drug toxicity on the subsequent parasuicide rate would be very interesting. Of course, the information should be provided in schemata that are not related to suicidal behavior.

C. Concluding Remarks

The proposed model is not intended to be complete, rather it represents what is considered to be a efficacious framework for asking questions and testing hypotheses. It is viewed as a starting point from which to build.

As well, the model was developed with a certain schema in mind. "Scientific investigation could not be carried out if men were too open-minded. Pure empiricism is impossible: facts do not speak for themselves . . . Although the rejection of discrepant information may lead to incorrect conclusions, this process is a necessary part of theory building" (Jervis quoted in Taylor & Crocker, 1981, p. 114). It is now time for others to evaluate the proposed model from the perspective of their own schemata.

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APPENDIX A

INFORMATION SHEET

Information Sheet

My name is Philomena Mortensen and I am graduate student at the University of Alberta. The purpose of this letter is to ask for your help with my research. The project is concerned with exploring the problems that adolescents and young adults experience which result in them coming to a hospital becauseof self-harmful behaviors. It is anticipated that this research will provide information that may be useful to those interested in helping people in similar circumstances.

The research involves one 2-3 hour session in which participants are interviewed and asked to fill out some forms. It is hoped that you might find it personally beneficial to talk about some of the areas that will be explored. All answers will be completely confidential, and individuals' names will not be put on any of the materials used. This project has been approved by both University and Hospital Research Committees.

Your participation is this study will be very much appreciated. If you would be interested in finding out more about this project please let the person who gave you this letter know, or leave a message for me at 268-9217. I will call you to discuss the project with you in more detail.

Thank you

APPENDIX B

CONSENT FORM

CONSENT FORM

Research Project: Emergency Department Project
Investigators: Philomena Mortensen; Dr. Bryan Tanney

This consent form should give you the basic idea of what the research project is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully.

The purpose of this project is to explore the problems that some adolescents and young adults have which may result in their coming to the Emergency Department at this hospital. In order to do this a number of individuals are being approached to provide information regarding this matter. Participants are requested to fill out some questionnaires and to be interviewed. All answers will be completely confidential, and individuals' names will not be put on any of the materials used. The time involved is approximately 2 - 3 hours.

The subject matter covered in the interview includes feelings and attitudes, as well as information regarding your personal and family background. Some of the questions may be found to be very personal in nature, but participants do not have to answer any questions with which they do not feel comfortable. They can also withdraw from the study at any time. There are no known risks to asking information of this nature and participants might find it personally beneficial to explore some of the areas discussed in the interview. It is anticipated that this research will provide information that may be useful to those interested in helping people in similar circumstances.

Your signature on this form indicates that you have understood to your satisfaction the information regarding your participation in the research project and agree to participate in the project. In no way does this waive your legal rights nor release the investigators, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time without jeopardizing your health care. Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information throughout your participation. If you have further questions, please contact Philomena Mortensen at 268-9217

______________________ (Name)	______________________ (Name of witness)
______________________ (Signature of participant)	______________________ (Signature)
______________________ (Name of legal guardian)	______________________ (Date)
______________________ (Signature)	

APPENDIX C

INTERVIEW SCHEDULE

INTERVIEW SCHEDULE

Person # _______
Date of interview _________________
Date of Emergency Room presentation _________________
Age _______ Date of Birth _________________

1. Do you have any hobbies? ___yes ___no
   If yes; what are they?

2. Are you working?___yes ___no
   If yes; what do you do?
   ___part-time___full-time

3. Are you going to school?___yes ___no
   If yes, where?
   ___part-time___full-time

4. What is the last grade you have completed in your schooling. _______
   If not grade 12, why not?
   ___still enrolled
   ___suspended (specify)
   ___expelled (specify)
   ___dropped out (specify)
   ___other (specify)

5. What kind of marks do (did) you get? That is, for example, B's and C's.

6. Have you ever had to repeat a class or grade?
   ___yes___no
   If yes;
   What grade or class?
   Why?

7. Have you ever had any problems getting along with the other people at school?___yes___no
   If yes; Explain

8. Have you ever been considered a discipline problem at school?___ yes ___no If yes; Explain?

9. Have you ever been suspended from school?
   ___yes___no If yes;
   When?
   Why?

10. Have you ever dropped out of school?
___yes___no If yes;
When?
Why?

11. How often do you drink alcohol?
___never Go to 14
___once a month or less
___once every 2 - 3 weeks
___once a week
___3-5 times per week
___daily
___prior history only. Specify

12. How often do you get drunk?
___never
___once a month or less
___once every 2 - 3 weeks
___once a week
___3-5 times per week
___daily
___prior history only. Specify

13. How old were you when you first began drinking?

14. Have you ever tried drugs? ___yes ___no
If no go to 18
If yes;

15. What kind have you tried?

16. How often do you take drugs?
___once a month or less
___once every 2 - 3 weeks
___once a week
___3-5 times per week
___daily
___prior history only. Specify

17. How old were you when you first began using drugs?

18. Has alcohol or drugs ever caused you problems:
Socially? ___yes ___no If yes, explain

Physically ___yes ___no If yes, explain

Legally? ___yes ___no If yes, explain

19. Have you ever run away from home? ___yes ___no
    If yes, when?
    Why?

20. Have you ever been involved in any activities that are illegal? ___yes ___no
    If yes, specify.

21. Have you ever been in trouble with the law?
    ___yes___no If yes, when?
    What happened?

22. What is your present religion?
    ___Catholic
    ___Protestant Specify
    ___Jewish
    ___Other Specify
    ___None

23. In what religion were you raised?
    ___Same as above
    ___Catholic
    ___Protestant Specify
    ___Jewish
    ___Other Specify___
    ___None

24. Approximately how many times during the past 12 months have you attended a church service?

Now I'm going to ask you some questions about your family.

25. Are your mother and father living together?
    ___yes___no If not;
    How old were you?
    What happened

    How did you feel

26. Have either of your parents been married more than once?
    ___yes___no If yes
    Explain

27. How many children are there in your family?

Name	Sex	Age	Lives at home

28. Is your father employed at present? ___yes ___ no
    If no, why not?

29. What is your father's occupation?

30. (If working) Approximately how much money does he make?
    ___0-10,000
    ___10,000-20,000
    ___20,000-30,000
    ___30,000-40,000
    ___40,000-50,000
    ___50+

31. What has his past employment history been like?
    ___employed steadily
    ___employed irregularly
    ___chronically unemployed

32. What is your father's highest level of education?
    ___never reached high school
    ___some high school
    ___high school graduate
    ___some technical school or college
    ___some university
    ___technical school or college graduate
    ___university graduate
    ___post graduate

33. Is your mother employed at present? ___yes ___no
    If no, why not?
34. What is your mother's occupation?

35. (If working) Approximately how much money does she make?
    ___0-10,000
    ___10,000-20,000
    ___20,000-30,000
    ___30,000-40,000
    ___40,000-50,000
    ___50+

36. What has her past employment history been like?
    ___employed steadily
    ___employed irregularly
    ___housewife
    ___chronically unemployed

37. What is your mother's highest level of education?
___never reached high school
___some high school
___high school graduate
___some technical school or college
___some university
___technical school or college graduate
___university graduate
___post graduate

38. Does your family have any financial problems that you are
aware of? ___yes ___no
If yes, what are they?

39. Have you ever been separated from one or both of your parents (natural, step,
foster, as applies) for six months or more?___yes___no
If yes

From	Age	Duration	Reason
Mother			
Father			
Siblings			

40. How many times have you moved residenceee
Ages
Reason

41. Have you ever had a serious physical illness or injury? ___yes ___no
If yes when?
Desribe.

How did people react to you?

Have you ever been hospitalized? ___yes ___no
If yes explain.

42. Has any member of your family had a serious physical injury or illness?
___yes ___ no
Describe

43. Have you ever been to a psychiatrist or psychologist for help? ___yes ___no
When and for how long?
Details

44. Has any member of your family ever been to a psychiatrist or psychologist for
help? ___yes ___no
When and for how long?
Details

45. How often does your father drink alcohol?
    ___never
    ___once a month or less
    ___once every 2 - 3 weeks
    ___once a week
    ___3-5 times per week
    ___daily
    ___prior history only. Specify

46. How often does he drink alcohol to excess?
    ___never
    ___once a month or less
    ___once every 2 - 3 weeks
    ___once a week
    ___3-5 times per week
    ___daily
    ___prior history only. Specify

47. How often does your mother drink alcohol?
    ___never
    ___once a month or less
    ___once every 2 - 3 weeks
    ___once a week
    ___3-5 times per week
    ___daily
    ___prior history only. Specify

48. How often does she drink alcohol to excess?
    ___never
    ___once a month or less
    ___once every 2 - 3 weeks
    ___once a week
    ___3-5 times per week
    ___daily
    ___prior history only. Specify

49. Has alcohol or drug use by any of your family members caused problems within your family? ___yes ___no
    If yes explain.

50. Do either of your parents use drugs? ___yes ___no
    If yes, what kind?
    How often?

51. How would you describe your parents' relationship?

52. Describe your relationship with your father.

53. Describe your relationship with your mother.

54. How do you get along with the other members of your family?

55. Would you describe your family as close?
___yes ___no
Why or why not?

56. Would you say that your family communicates openly with each other?
___yes ___no
Explain

57. Who makes the decisions in your family regarding:
important matters?
unimportant matters?

58. If your mom and dad have a decision to make, how do they go about doing it?

59. Are you included in the family decision-making process?
___yes___no If no, explain.
If yes, When
How often
How

60. Do you participate in family decisions regarding discipline, behavior standards, etc.
___yes___no Explain

61. Would you describe your parents as strict, controlling, or lenient? Explain.

62. Do you think your parents treat you consistently?
___yes___no Explain

63. What are the major conflicts in your family? That is, what do you argue about the most?

Who argues with whom?
With whom do you argue?

64. What do your parents disagree about?

65. How do they resolve their disagreements?

66. How do other members in your family resolve conflicts or arguments?

67. Are you ever the center of conflict in the family?
___yes___no If yes,
When/how often?

What type of conflict?

With whom?

How are they resolved?

68. How do you resolve conflicts or arguments either outside or inside your family?

69. If you are angry with someone, do you usually let them know it? ___yes ___no
Explain.

70. If you needed help from someone, would you go to them and ask them for help?
___yes ___no
Why or why not?

If yes; who would it be?
Under what circumstances?

71. If you had a problem, would you prefer to work it out with the help of someone or would you prefer to deal with it on your own ? ___prefer help ___on your own
Why?

72. Is there someone within your family you can turn to for support? ___yes ___no
Who?
If yes, under all circumstances or only some?
Explain.

73. When you are undergoing stress or difficulties, do you go to your parents to ask for help? ___yes ___no
Why or why not?

If yes, under all circumstances or only some?
Explain.

74. Is there someone outside your family you can turn to for support? ___yes ___no
Who?
If yes, under all circumstances or only some?

75. If you needed help, is there an outside source you feel you could go to such as a school counsellor, doctor, priest or minister? ___yes ___no
If yes, who?
Would you go to them? ___yes ___no Why or why not?

76. Do you feel close to any adult?___ yes ___no
    If yes, who?
    If no, have you ever?

77. Do you have any close friends? ___yes___no
    How many?
    For how long?

78. Do you think you need more friends? ___yes ___no
    Why?

79. Have you had many problems with your friends?
    ___yes___no If yes, explain.

80. Do you have a boyfriend? ___yes ___no
    If yes, could you describe your relationship with him?

    If no, have you ever had a boyfriend? ___yes ___no
    If yes, of all your relationships could you describe your most serious one?

81. Has there been any times in your life when you have lost or been separated from something or someone that was important to you? ___yes___ no
    If yes; What happened?

    How old were you?
    Did you know this was about to happen?
    Did someone explain it to you?
    How did you understand it?

    How did you cope with it?

Do you feel comfortable in discussing your sexual background? ___yes ___no
If no, go to 83

82. Would you describe yourself as sexually active?
    ___yes ___no
    If yes; For how long?
    How many partners?

83. Has anyone ever physically abused you?
    ___yes___no
    If yes, explain.

84. Has anyone ever sexually abused you?
___yes___no
If yes, explain.

85. What do you see in your future?

86. What are your goals for the future?

87. How will you go about obtaining your goals?

88. How do you see your employment opportunities?

89. If you could make some changes in your life, what would they be?

90. Do you remember someone in your family or a friend ever threatening suicide?
___yes___ no If yes,
Who?
Why do you think they did it?

How did other people react?

91. Do you know of anyone who has committed suicide?
___yes___no If yes,
Who?
How close were they to you?
When?
What happened?
How did other people react?
Why do you think they did it?
Do you think they really wanted to die? ___yes ___no
Explain.

Do you agree with what they did? ___yes ___no
Why or why not?

92. Do you know anyone who has attempted suicide?
___yes___no If yes,
Who?
How close were they to you?
When?
What happened?

How did other people react?

Why do you think they did it?

Do you think they really wanted to die? ___yes ___no
Explain.

How did their life change afterwards?
Do you agree with what they did? ___yes ___no
Why or why not?

If OD respondent:
Do you see what they did as being similar to what you did? ___yes ___no
Why or why not?

93. Do you remember seeing on television or reading in a paper or book about someone who attempted or committed suicide? ___yes ___no
If yes; describe

Parasuicide Group Only

Now I would like to ask you some questions about your overdose.

1. At what stage did the idea of taking the pills occur to you? That is when did you first think about doing this? (Get in minutes).

2. Describe how you were feeling at the time?

3. With whom, if any, did you tell of your plans to take the overdose?

4. Did you drop any hints?___ yes ___no
   If yes , explain.

5. Did you leave a note? ___yes___no
   If yes, explain.

6. What type of pills did you take and how many?

7. Where did you get the pills?

8. Where were you when you took them?

9. Was there anyone else around? ___yes___ no
   If yes, who?
   Where were they?

10. What time of day was it?

11. Were you using alcohol at the time? ___yes ___no
    If yes?
    For how long?
    How much?

12. Had you taken any other drugs at the time?
    ___yes___no If yes
    What kind?
    How much?
    How long before?

13. Did you think that the amount that you took could have caused any physical damage to your body?
    ___yes___no If yes describe

14. What did you do immediately after you took the overdose?

15. How did you feel then?

16. What did you think would happen?

17. Did someone find you or did you tell someone?

18. What happened then?

19. How did you get to the hospital?

20. What did you tell the hospital staff that attended you?

21. What medical treatment did you receive?

22. When was the last time you had seen a doctor before this time?

23. Can you explain to me why you ended up taking the pills?

24. Did anything in particular happen which made you decide to take the overdose?

25. Were there any other problems which might have affected your decision to take the overdose?

26. Before taking the overdose, did you feel you needed help in some way?
___yes ___no
If yes what kind?

27. Did you seek help at the time ___yes___no
If no, why not?

If yes, what happened?

28. Did you discuss your problems with anyone?
___yes___no If no, why not?

If yes, what happened?

29. When you were in the mist of this situation, did you contact any agencies to help you ?
___yes___no Why or why not?

30. Did you try any other way of dealing with your problem before taking the overdose? ___yes ___no
If no, why not?

If yes, what happened?

31. (If a key person was involved) Did you try talking to (the key person)?
___yes ___no
If yes, what happened?

If no, why not?

32. Why did taking an overdose seem most likely to provide the results you wanted?

33. Were there any other outcomes that could have been acceptable to you besides the one that prompted the overdose?

34. What did you think would happen as a result of taking the pills?
Physically:
in the short-term

in the long-term

Emotionally:
in the short-term

in the long-term

35. What would have changed in your life if the attempt had the result you hoped?

36. Do you think taking the overdose was successful in changing your life the way you wanted it to?
___yes___no Explain.

37. Who did you think would be hurt by your taking the overdose?

38. What did you imagine people's reaction to your attempt would be?

39. What was the reaction of your mother to the overdose?
What did she do, how did she feel?

40. What was the reaction of your father to the overdose?
What did he do, how did he feel?

41. What was the reaction of the significant other (If not above)?
What did he do, how did he feel?

42. How did you explain the overdose to your family and friends?

43. How did your friends respond to the overdose?

44. At the time of the overdose did you:
___want to die
___didn't mind whether you lived or died
___did not want to die

45. How did you feel at the time of the overdose? (Check all that apply)
___angry with someone
___lonely or unwanted
___worried about the future
___failed in life
___sorry or ashamed of something
___other

46. People usually have more than one reason for taking an overdose. Could you indicate the degree to which the following factors influenced your action.

a. You wanted to seek help or attention.

did not at all influence me	1	2	3	4	5	6	7	totally influenced me

b. You wanted to escape from an impossible situation.

did not at all influence me	1	2	3	4	5	6	7	totally influenced me

c. You wanted to get relief from an impossible state of mind.

did not at all influence me	1	2	3	4	5	6	7	totally influenced me

d. You wanted to influence someone (get boyfriend/girlfriend back or change parents' mind).

did not at all influence me	1	2	3	4	5	6	7	totally influenced me

e. You wanted to show how much you loved someone.

did not at all totally
influence me 1 2 3 4 5 6 7 influenced me

f. You wanted to make things easier for others.

did not at all totally
influence me 1 2 3 4 5 6 7 influenced me

g. You wanted to make some other person feel sorry.

did not at all totally
influence me 1 2 3 4 5 6 7 influenced me

h. You wanted to frighten someone.

did not at all totally
influence me 1 2 3 4 5 6 7 influenced me

i. You wanted to make people see how bad you were feeling.

did not at all totally
influence me 1 2 3 4 5 6 7 influenced me

j. You wanted to find out if you were loved by someone.

did not at all totally
influence me 1 2 3 4 5 6 7 influenced me

k. You were in an unbearable situation and did not know what else to do.

did not at all totally
influence me 1 2 3 4 5 6 7 influenced me

l. You just lost control and had no idea what you were doing.

did not at all totally
influence me 1 2 3 4 5 6 7 influenced me

m. You wanted to die.

did not at all totally
influence me 1 2 3 4 5 6 7 influenced me

n. Other

did not at all totally
influence me 1 2 3 4 5 6 7 influenced me

47. Could you please rate your overdose along the following dimensions from the perspective of how you felt at the time you took the overdose.

useless and likely to fail	1	2	3	4	5	6	7	effective in solving my problems
sensible and thought out	1	2	3	4	5	6	7	impulsive and desperate
a way of hiding feelings	1	2	3	4	5	6	7	expressing feelings
helpful and positive	1	2	3	4	5	6	7	harmful and destructive
a way of blaming the other person	1	2	3	4	5	6	7	a way of blaming myself
a way of changing my situation	1	2	3	4	5	6	7	resulting in me giving in
making me frustrated and worked up	1	2	3	4	5	6	7	allowing me to escape from tension
allowing me to communicate my needs to others	1	2	3	4	5	6	7	denying everything
hard for me personally	1	2	3	4	5	6	7	easy for me personally

48. How are things different since you took the overdose?

49. Do you think you would do anything like this again?
___yes ___no Why or why not?

50. If a friend came to you with a similar problem, what suggestions could you give to them for dealing with their problem?

51. Did you try any of these? ___yes ___no
Why or why not?

52. What other options did you see you had? That is, can you remember any of the other things you thought you might do at the time? (Discuss each and find out why not chosen.)

53. Of all the teenagers who attempt suicide, what percentage do you think really want to die?

54. Is there anything else that you want to tell me which would help me to understand the reason behind your taking the overdose?

Comparision Group Only

1. Can you think of a situation you have been in recently that was very stressful.
   Could you tell me about it?
   How did you deal with it?

   Let's talk about the problems that lead up to this situation and what other options you might have had for dealing with it.

2. Some people, when they are in a difficult situation, attempt suicide by intentionally taking an overdose of drugs. Listed below are a number of reasons someone might do this. For each reason indicate whether you think it is a likely or unlikely reason for someone to take a drug overdose.

   a. Seek help or attention.

   unlikely 1 2 3 4 5 6 7 likely

   b. Escape from an impossible situation.

   unlikely 1 2 3 4 5 6 7 likely

   c. Get relief from an impossible state of mind.

   unlikely 1 2 3 4 5 6 7 likely

   d. Try to influence someone (get boyfriend/girfriend back or change parents' mind).

   unlikely 1 2 3 4 5 6 7 likely

   e. Show how much they love someone.

   unlikely 1 2 3 4 5 6 7 likely

   f. Make things easier for others.

   unlikely 1 2 3 4 5 6 7 likely

   g. Make some other person feel sorry.

   unlikely 1 2 3 4 5 6 7 likely

   h. Frighten someone.

   unlikely 1 2 3 4 5 6 7 likely

i. Make people see how bad one is feeling.

unlikely 1 2 3 4 5 6 7 likely

j. Find out if he/she is loved by someone.

unlikely 1 2 3 4 5 6 7 likely

k. Is in an unbearable situation, doesn't know what else to do.

unlikely 1 2 3 4 5 6 7 likely

l. Person just loses control, no idea what he/she is doing.

unlikely 1 2 3 4 5 6 7 likely

m. Want to die.

unlikely 1 2 3 4 5 6 7 likely

n. Other

unlikely 1 2 3 4 5 6 7 likely

3. Indicate whether you think attempting suicide would result in the following outcomes.

a. Would result in getting help or attention.

unlikely 1 2 3 4 5 6 7 likely

b. Would result in an escape from an impossible situation.

unlikely 1 2 3 4 5 6 7 likely

c. Would result in relief from an impossible state of mind.

unlikely 1 2 3 4 5 6 7 likely

d. Would result in influencing someone (get boyfriend/girfriend back or change parents' mind).

unlikely 1 2 3 4 5 6 7 likely

e. Would result in showing how much he/she loves someone.

unlikely 1 2 3 4 5 6 7 likely

f. Would make things easier for others.

unlikely 1 2 3 4 5 6 7 likely

g. Would make some other person feel sorry.

unlikely 1 2 3 4 5 6 7 likely

h. Would frighten someone.

unlikely 1 2 3 4 5 6 7 likely

i. Would make people see how bad one is feeling.

unlikely 1 2 3 4 5 6 7 likely

j. Would find out if he/she is loved by someone.

unlikely 1 2 3 4 5 6 7 likely

m. Would result in death.

unlikely 1 2 3 4 5 6 7 likely

n. Other (from previous question if other outcome given).

unlikely 1 2 3 4 5 6 7 likely

4. Could you rate taking an overdose according to the following scale.

useless and likely to fail	1	2	3	4	5	6	7	effective in solving one's problems
sensible and thought out	1	2	3	4	5	6	7	impulsive and desperate
a way of hiding feelings	1	2	3	4	5	6	7	expressing feelings
helpful and positive	1	2	3	4	5	6	7	harmful and destructive

a way of blaming the other person	1	2	3	4	5	6	7	a way of blaming myself
a way of changing my situation	1	2	3	4	5	6	7	resulting in one giving in
making one frustrated and worked up	1	2	3	4	5	6	7	allowing one to escape from tension
allowing one to communicate his/her needs to others	1	2	3	4	5	6	7	denying everything
hard for me personally	1	2	3	4	5	6	7	easy for me personally

5. Now you have indicated that this would be (fairly hard/ fairly easy) for you do . Can you tell me more about this.

6. What do you think the consequences of taking a drug overdose are:
   Physically
      In the short-term?
      In the long-term?
   Emotionally
      In the short-term?
      In the long-term?

7. Do you think if you were in a crisis situation (for example, fighting with your parents or your boyfriend) and didn't know what to do, you might try to solve your problem by attempting suicide?___yes ___no
   Why or why not?

8. Do you think teenagers who attempt suicide really want to die?

Definitely Not	1	2	3	4	5	6	7	Definitely

APPENDIX D

BARRETT IMPULSIVENESS SCALE (BIS-10)

PERSONAL EVALUATION - BIS - 10

NAME: ______________________________ DATE: ____________

DIRECTIONS: People differ in the ways they act and think in different situations. This is a test to measure some of the ways in which you act and think. Read each statement and darken the appropriate circle on the right side of the page. Do not spend too much time on any statement. Answer quickly and honestly.

	Rarely/never	Occasionally	Often	Almost always/ Always
1. I plan tasks carefully	○	○	○	○
2. I do things without thinking	○	○	○	○
3. I make-up my mind quickly	○	○	○	○
4. I am happy-go-lucky	○	○	○	○
5. I don't "pay attention"	○	○	○	○
6. I have "racing" thoughts	○	○	○	○
7. I plan trips well ahead of time	○	○	○	○
8. I am self-controlled	○	○	○	○
9. I concentrate easily	○	○	○	○
10. I save regulary	○	○	○	○
11. I "squirm" at plays or lectures	○	○	○	○
12. I am a careful thinker	○	○	○	○
13. I plan for job security	○	○	○	○
14. I say things without thinking	○	○	○	○
15. I like to think about complex problems	○	○	○	○
16. I change jobs	○	○	○	○
17. I act "on impulse"	○	○	○	○
18. I get easily bored when solving thought problems	○	○	○	○
19. I have regular health check ups	○	○	○	○
20. I act on the spur of the moment	○	○	○	○

	Rarely/never	Occasionally	Often	Almost always/ Always
21. I am a steady thinker	0	0	0	0
22. I change residences	0	0	0	0
23. I buy things on impulse	0	0	0	0
24. I can only think about one problem at a time	0	0	0	0
25. I change hobbies	0	0	0	0
26. I walk and move fast	0	0	0	0
27. I solve problems by trial-and-error	0	0	0	0
28. I spend or charge more than I earn	0	0	0	0
29. I talk fast	0	0	0	0
30. I have extraneous thoughts when thinking	0	0	0	0
31. I am more interested in the present than the future	0	0	0	0
32. I am restless at the theater or lectures	0	0	0	0
33. I like puzzles	0	0	0	0
34. I am future oriented	0	0	0	0

END

APPENDIX E

LETHALITY OF SUICIDE ATTEMPT RATING SCALE

The Lethality of Suicide Attempt Rating Scale

0.0 DEATH IS AN IMPOSSIBLE RESULT OF THE "SUICIDAL" BEHAVIOR.

This includes mild overdoses. Ten or fewer ASA, Tylenol, "cold pills," laxatives, or other over-the-counter drugs; mild doses of tranquilizers or prescribed medications (usually fewer than 10 pills).

1.0 DEATH IS VERY HIGHLY IMPROBABLE. IF IT OCCURS IT WOULD BE A RESULT OF SECONDARY COMPLICATION, AN ACCIDENT, OR HIGHLY UNUSUAL CIRCUMSTANCES.

Relatively mild overdoses usually brought by the patient to staff attention. Twenty or fewer ASA, laxatives, and/or over-the-counter meds (e.g., Sominex, Nytol, 15 or fewer Tylenol). Small doses of potentially lethal medications (e.g., six Tuinal, four Seconal) are also common; fewer than 20 (10 mg.) Thorazine tablets.

2.0 DEATH IS IMPROBABLE AS AN OUTCOME OF THE ACT: IF IT OCCURS IT IS PROBABLY DUE TO UNFORESEEN SECONDARY EFFECTS. FREQUENTLY THE ACT IS DONE IN A PUBLIC SETTING OR IS REPORTED BY THE PRSON OR BY OTHERS. WHILE MEDICAL AID MAY BE WARRANTED, IT IS NOT REQUIRED FOR SURVIVAL.

May receive but does not usually require medical intervention to survive. Thirty or fewer ASA and/or other over-the-counter pills; fewer than 100 laxatives; twenty-five or fewer Regular strength Tylenol. Small doses of potentially lethal medications (e.g., 21 65-mg. Darvon, 12 tablets of Fiorinal), greater quantities of aspirin might be taken when staff is notified within minutes by the patient. Fourteen or fewer lithium carbonate tablets.

3.5 DEATH IS IMPROBABLE SO LONG AS FIRST AID IS ADMINISTERED BY VICTIM OR OTHER AGENT. VICTIM USUALLY MAKES A COMMUNICATION OR COMMITS THE ACT IN A PUBLIC WAY OR TAKES NO MEASURES TO HIDE SELF OR INJURY.

Ingestion: This is a significant overdose and may correspond to the lower part of the LD_{50} range. Fewer than 60 ASA or other over-the-counter pills. Higher doses may be taken but patient insures intervention (e.g., 64 Sominex). Over 100 laxatives; 50 or fewer Tylenol. Potentially lethal overdoses (e.g., 60 Dilantin capsules plus half a fifth of rum) but done in such a way as to insure intervention.

5.0 DEATH IS A FIFTY-FIFTY PROBABILITY DIRECTLY OR INDIRECTLY, OR IN THE OPINION OF THE AVERAGE PERSON, THE CHOSEN METHOD HAS AN EQUIVOCAL OUTCOME. USE THIS RATING ONLY WHEN:
(1) DETAILS ARE VAGUE;
(2) A CASE CANNOT BE MADE FOR RATING EITHER A 3.5 OR 7.0.

7.0 DEATH IS THE PROBABLE OUTCOME UNLESS THERE IS "IMMEDIATE" AND "VIGOROUS" FIRST AID OR MEDICAL ATTENTION BY VICTIM OR OTHER AGENT. ONE OR BOTH OF THE FOLLOWING ARE ALSO TRUE:
(1) MAKES COMMUNICATION (DIRECTLY OR INDIRECTLY);
(2) PERFORMS ACT IN PUBLIC WHERE HE IS LIKELY TO BE HELPED OR DISCOVERED.

Potentially lethal medications and quantities. This would involve a dose which, without medical intervention, would kill most people (usually at the upper end of the LD_{50} range or beyond). Examples: Eloping and ingesting approximately two bottles of ASA and then returning to the hospital; 50 Extra-Strength Tylenol, eloping to motel and ingesting large quantities of Inderal, Dalmane, Mellaril, and three quarters of a fifth of bourbon, then making indirect communication of distress; took 23 100-mg. tablets of phenobarbital but told roommate immediately who told staff.

8.0 DEATH WOULD ORDINARILY BE CONSIDERED THE OUTCOME TO THE SUICIDAL ACT, UNLESS SAVED BY ANOTHER AGENT IN A "CALCULATED" RISK (e.g., NURSING ROUNDS OR EXPECTING A ROOMMATE OR SPOUSE AT A CERTAIN TIME). ONE OR BOTH OF THE FOLLOWING ARE TRUE:
(1) MAKES NO DIRECT COMMUNICATION;
(2) TAKES ACTION IN PRIVATE.

Clearly lethal doses and no communication is made. Examples: Taking a lethal overdose of barbiturates but vomiting before going into a coma; overdoses on 900 mg Stelazine in apartment alone; overdosed on phenobarbital plus alcohol, found comatose in her bed.

9.0 DEATH IS A HIGHLY PROBABLE OUTCOME: "CHANCE" INTERVENTION AND/OR UNFORESEEN CIRCUMSTANCES MAY SAVE VICTIM. TWO OF THE FOLLOWING CONDITIONS ALSO EXIST:
(1) NO COMMUNICATION IS MADE;
(2) EFFORT IS PUT FORTH TO OBSCURE ACT FROM HELPERS' ATTENTION;
(3) PRECAUTIONS AGAINST BEING FOUND ARE INSTITUTED (e.g., ELOPING).

Clearly lethal overdoses.

10.0 DEATH IS ALMOST A CERTAINTY REGARDLESS OF THE CIRCUMSTANCES OR INTERVENTIONS BY AN OUTSIDE AGENT. MOST OF THE PEOPLE AT THIS LEVEL DIE QUICKLY AFTER THE ATTEMPT. A VERY FEW SURVIVE THROUGH NO FAULT OF THEIR OWN.

Because of the time usually involved before a toxin can take effect there are very few circumstances of overdosing that can be considered this serious.

APPENDIX F

MEANS-ENDS PROBLEM SOLVING PROCEDURE

Means-Ends Problem Solving Procedure

In this procedure we are interested in your imagination. Your are to make up some stories. For each story you will be told the beginning of the story and how the story ends. Your job is to make up a story that connects the beginning that is given you with the ending given you. In other words, you will make up the middle of the story. Tell a complete story. Include everything that happens between the beginning and the end.

1. Mrs C. had just moved in that day and didn't know anyone. Mrs. C. wanted to have friends in the neighborhood. The story ends with Mrs. C. having many good friends and feeling at home in the neighborhood. You begin the story with Mrs. C. in her room immediately after arriving in the neighborhood.

2. H. loved her boyfriend very much, but they had many arguments. One day he left her. H. wanted things to be better. The story ends with everything fine between them. You begin the story with the boyfriend leaving after an argument.

3. One day Ann was standing around with some other people when one of them said something very nasty to Ann. Ann got very mad. Ann got so mad she decided to get even with the other person. The story ends with Ann happy because she got even. You begin the story when Ann decided to get even.

4. Susan noticed that her friends seemed to be avoiding her. Susan wanted to have friends and be liked. The story ends when Susan's friends like her again. You begin where she first notices her friends avoiding her.

APPENDIX G

NOWICKI-STRICKLAND CHILDRENS LOCUS OF CONTROL SCALE

The Nowicki-Strickland Personal Reaction Survey

Following are a number of statements. If you agree with the statement circle 'YES'. If you do not agree with the statement circle 'NO'.

1. Do you believe that most problems will solve themselves if you just don't fool with them? YES NO
2. Are you often blamed for things that just aren't your fault? YES NO
3. Do you feel that most of the time it doesn't pay to try hard because things never turn out right anyway? YES NO
4. Do you feel that most of the time parents listen to what their children have to say? YES NO
5. When you get punished does it usually seem it's for no good reason at all? YES NO
6. Most of the time do you find it hard to change a friend's (mind) opinion? YES NO
7. Do you feel that it's nearly impossible to change your parent's mind about anything? YES NO
8. Do you feel that when you do something wrong there's very little you can do to make it right? YES NO
9. Do you believe that most people are just born good at sports? YES NO
10. Do you feel that one of the best ways to handle most problems is just not to think about them? YES NO
11. Do you feel that when a person your age decides to hit you, there's little you can do to stop him or her? YES NO
12. Have you felt that when people were mean to you it was usually for no good reason at all? YES NO
13. Most of the time, do you feel that you can change what might happen tomorrow by what you do today? YES NO
14. Do you believe that when bad things are going to happen they just are going to happen no matter what you try to do to stop them? YES NO
15. Most of the time do you find it useless to try to get your own way at home? YES NO

16. Do you feel that when somebody your age wants to be your enemy there's little you can do to change matters? YES NO

17. Do you usually feel that you have little to say about what you get to eat at home? YES NO

18. Do you feel that when someone doesn't like you there's little you can do about it? YES NO

19. Do you usually feel that it's almost useless to try in school because most other people are just plain smarter than you are? YES NO

20. Are you the kind of person who believes that planning ahead makes things turn out better? YES NO

21. Most of the time, do you feel that you have little to say about what your family decides to do? YES NO

APPENDIX H

OPTIONAL THINKING TEST

Optional Thinking Test

"Now I am going to tell you some things that happen to a person, and I want you to think of all the things she could do about it. Tell me everything that comes into your head. And don't worry about being right or wrong because there are no right or wrong answers, O.K.?"

1. Mary wants to watch her favorite TV program but her friend is watching another program. What can Mary do so she can have a turn watching TV? ------ What else do you think she might do? ----- What else?

2. Betty wants people to listen to her but no one ever does. What can Betty do to get listened to? ------ What else can she do? ------ What else?

3. Susan wants her friend to go to the movies with her this evening, but her friend doesn't want to go. What can Susan do to get her friend to go with her to the movies this weekend? ------ What else can she do? ------ What else?

4. Janet broke her husband's favorite flower pot and she's afraid her husband will be mad at her. What can Janet do so her husband won't be mad? ------ What else can she do? ------ What else?

APPENDIX I

PROBLEM SOLVING INVENTORY

Problem Solving Inventory

Following are a number of statements. You are to indicate if you feel that statement describes you by circling a number from 1 to 6.

1. When my first efforts to solve a problem fail, I become uneasy about my ability to handle the situation.

   Like me 1 2 3 4 5 6 Not like me

2. When I have a problem, I think up as many possible ways to handle it as I can until I can't come up with any more ideas.

   Like me 1 2 3 4 5 6 Not like me

3. I have the ability to solve most problems even though initially no solution is immediately apparent.

   Like me 1 2 3 4 5 6 Not like me

4. When confronted with a problem, I tend to do the first thing that I can think of to solve it.

   Like me 1 2 3 4 5 6 Not like me

5. Sometimes I do not stop and take time to deal with my problems, but just kind of muddle ahead.

   Like me 1 2 3 4 5 6 Not like me

6. When deciding on an idea or possible solution to a problem, I do not take time to consider the chances of each alternative being successful.

   Like me 1 2 3 4 5 6 Not like me

7. When making a decision, I weigh the consequences of each alternative and compare them against each other.

   Like me 1 2 3 4 5 6 Not like me

8. When I make plans to solve a problem, ~~I am~~ almost certain that I can make them work.

   Like me 1 2 3 4 5 6 Not like me

9. When I try to think up possible solutions to a problem, I do not come up with very many alternatives.

   Like me 1 2 3 4 5 6 Not like me

10. Given enough time and effort, I believe I can solve most problems that confront me.

Like me 1 2 3 4 5 6 Not like me

11. Even though I work on a problem, sometimes I feel like I am groping or wandering, and am not getting down to the real issue.

Like me 1 2 3 4 5 6 Not like me

12. I make snap judgments and later regret them.

Like me 1 2 3 4 5 6 Not like me

13. I trust my ability to solve new and difficult problems.

Like me 1 2 3 4 5 6 Not like me

14. When I am confused by a problem, one of the first things I do is survey the situation and consider all the relevant pieces of information.

Like me 1 2 3 4 5 6 Not like me

15. Sometimes I get so charged up emotionally that I am unable to consider many ways of dealing with my problems.

Like me 1 2 3 4 5 6 Not like me

16. When confronted with a problem, I am unsure of whether I can handle the situation.

Like me 1 2 3 4 5 6 Not like me

APPENDIX J

SEMANTIC DIFFERENTIAL ON ATTEMPTED SUICIDE

SEMANTIC DIFFERENTIAL ON ATTEMPTED SUICIDE

The purpose of this scale is to measure the meaning of attempted suicide to you by having you indicate your judgement on a series of descriptive scales. Please make your judgements on the basis of what attempted suicide means to you.

The scales should be used as follows:

If you feel that attempted suicide is very closely related to one or the other end of the scale, you should place your rating in the space a indicated below:

fair __X__:_____:_____:_____:_____:_____:_____ unfair

OR

fair _____:_____:_____:_____:_____:_____:__X__ unfair

If you feel that attempted suicide is quite closely related to one or the other end of the scale you should place your rating in the space as indicated below:

fair _____:__X__:_____:_____:_____:_____:_____ unfair

OR

fair _____:_____:_____:_____:_____:__X__:_____ unfair

If you feel that attempted suicide is only slightly related to one side as opposed to the other, then you should place your rating as indicated below:

fair _____:_____:__X__:_____:_____:_____:_____ unfair

OR

fair _____:_____:_____:_____:__X__:_____:_____ unfair

If you consider attempted suicide to be neutral on a scale, or consider both sides to be equally associated with attempted suicide, or if you consider the scale irrelevant or unrelated to attempted suicide, then you should place your rating in the middle as indicated below:

fair _____:_____:_____:__X__:_____:_____:_____ unfair

IMPORTANT: Place marks in the middle of spaces, not on the boundaries.

Thank you. Please proceed to the following page.

ATTEMPTED SUICIDE

a. selfish _____:_____:_____:_____:_____:_____:_____ unselfish
b. passive _____:_____:_____:_____:_____:_____:_____ active
c. repentent _____:_____:_____:_____:_____:_____:_____ unrepentent
d. aimless _____:_____:_____:_____:_____:_____:_____ motivated
e. stable _____:_____:_____:_____:_____:_____:_____ unstable
f. involuntary _____:_____:_____:_____:_____:_____:_____ voluntary
g. strong _____:_____:_____:_____:_____:_____:_____ weak
h. wrong _____:_____:_____:_____:_____:_____:_____ right
i. deliberate _____:_____:_____:_____:_____:_____:_____ impulsive
j. beautiful _____:_____:_____:_____:_____:_____:_____ ugly
k. careless _____:_____:_____:_____:_____:_____:_____ careful
l. innocent _____:_____:_____:_____:_____:_____:_____ guilty
m. shallow _____:_____:_____:_____:_____:_____:_____ deep
n. hopeful _____:_____:_____:_____:_____:_____:_____ hopeless
o. sick _____:_____:_____:_____:_____:_____:_____ healthy
p. respectful _____:_____:_____:_____:_____:_____:_____ disrespectful
q. meaningless _____:_____:_____:_____:_____:_____:_____ meaningful
r. complex _____:_____:_____:_____:_____:_____:_____ simple
s. depressed _____:_____:_____:_____:_____:_____:_____ elevated
t. sane _____:_____:_____:_____:_____:_____:_____ insane
u. cowardly _____:_____:_____:_____:_____:_____:_____ brave
v. easy _____:_____:_____:_____:_____:_____:_____ difficult

APPENDIX K

SELF-EFFICACY TOWARDS HELP-SEEKING QUESTIONNAIRE

Help-Seeking Questionnaire

Below are some situations in which you might go to someone and ask for help. You are to determine, if you made your best effort, if you would be able to ask for help, and to rate your confidence in being able to do so.

1. If you needed help with your school work, do you think you would be capable of going to the following people to ask for help regardless of what the outcome would be?

A friend:

______yes ______no (go to b)

a. If you said "yes", rate your degree of confidence by recording a number from 1 to 100 in the space using the following scale:_______

1	10	20	30	40	50	60	70	80	90	100
quite uncertain					moderately certain					certain

b. If you were to ask for help from a friend, rate what you think the outcome would be by using the following scale?______

0	10	20	30	40	50	60	70	80	90	100
very negative					neutral					very positive

Your parents:

______yes ______no (go to b)

a. If you said "yes", rate your degree of confidence by recording a number from 1 to 100 in the space using the following scale:_______

1	10	20	30	40	50	60	70	80	90	100
quite uncertain					moderately certain					certain

b. If you were to ask for help from your parents, rate what you think the outcome would be by using the following scale?____

0	10	20	30	40	50	60	70	80	90	100
very negative					neutral					very positive

A professional (e.g., school counsellor or teacher):

______yes ______no (go to b)

a. If you said "yes", rate your degree of confidence by recording a number from 1 to 100 in the space using the following scale:_______

1	10	20	30	40	50	60	70	80	90	100
quite uncertain					moderately certain					certain

b. If you were to ask for help from a professional, rate what you think the outcome would be by using the following scale?____

0	10	20	30	40	50	60	70	80	90	100
very negative					neutral					very positive

A volunteer at a crisis line:

______yes ______no (go to b)

a. If you said "yes", rate your degree of confidence by recording a number from 1 to 100 in the space using the following scale:_______

1	10	20	30	40	50	60	70	80	90	100
quite uncertain					moderately certain					certain

b. If you were to ask for help from a volunteer, rate what you think the outcome would be by using the following scale?____

0	10	20	30	40	50	60	70	80	90	100
very negative					neutral					very positive

2. If you were having problems with your boyfriend, do you think you would be capable of going to the following people to ask for help regardless of what the outcome would be?

A friend:

______yes ______no (go to b)

a. If you said "yes", rate your degree of confidence by recording a number from 1 to 100 in the space using the following scale:_______

1	10	20	30	40	50	60	70	80	90	100
quite uncertain					moderately certain					certain

b. If you were to ask for help from a friend, rate what you think the outcome would be by using the following scale?______

0	10	20	30	40	50	60	70	80	90	100
very negative					neutral					very positive

Your parents:

______yes ______no (go to b)

a. If you said "yes", rate your degree of confidence by recording a number from 1 to 100 in the space using the following scale:_______

1	10	20	30	40	50	60	70	80	90	100
quite uncertain					moderately certain					certain

b. If you were to ask for help from your parents, rate what you think the outcome would be by using the following scale?____

0	10	20	30	40	50	60	70	80	90	100
very negative					neutral					very positive

A professional (e.g., school counsellor or teacher):

______yes ______no (go to b)

a. If you said "yes", rate your degree of confidence by recording a number from 1 to 100 in the space using the following scale:_______

1	10	20	30	40	50	60	70	80	90	100
quite uncertain					moderately certain					certain

b. If you were to ask for help from a professional, rate what you think the outcome would be by using the following scale?____

0	10	20	30	40	50	60	70	80	90	100
very negative					neutral					very positive

A volunteer at a crisis line:

______yes ______no (go to b)

a. If you said "yes", rate your degree of confidence by recording a number from 1 to 100 in the space using the following scale:______

1	10	20	30	40	50	60	70	80	90	100
quite uncertain					moderately certain					certain

b. If you were to ask for help from a volunteer, rate what you think the outcome would be by using the following scale?____

0	10	20	30	40	50	60	70	80	90	100
very negative					neutral					very positive

3. If you were having problems with your parents, do you think you would be capable of going to the following people to ask for help regardless of what the outcome would be?

A friend:

______yes ______no (go to b)

a. If you said "yes", rate your degree of confidence by recording a number from 1 to 100 in the space using the following scale:______

1	10	20	30	40	50	60	70	80	90	100
quite uncertain					moderately certain					certain

b. If you were to ask for help from a friend, rate what you think the outcome would be by using the following scale?______

0	10	20	30	40	50	60	70	80	90	100
very negative					neutral					very positive

Your parents:

______yes ______no (go to b)

a. If you said "yes", rate your degree of confidence by recording a number from 1 to 100 in the space using the following scale:______

1	10	20	30	40	50	60	70	80	90	100
quite uncertain					moderately certain					certain

b. If you were to ask for help from your parents, rate what you think the outcome would be by using the following scale?____

0	10	20	30	40	50	60	70	80	90	100
very negative					neutral					very positive

A professional (e.g., school counsellor or teacher):

______yes ______no (go to b)

a. If you said "yes", rate your degree of confidence by recording a number from 1 to 100 in the space using the following scale:_______

1	10	20	30	40	50	60	70	80	90	100
quite uncertain					moderately certain					certain

b. If you were to ask for help from a professional, rate what you think the outcome would be by using the following scale?____

0	10	20	30	40	50	60	70	80	90	100
very negative					neutral					very positive

A volunteer at a crisis line:

______yes ______no (go to b)

a. If you said "yes", rate your degree of confidence by recording a number from 1 to 100 in the space using the following scale:_______

1	10	20	30	40	50	60	70	80	90	100
quite uncertain					moderately certain					certain

b. If you were to ask for help from a volunteer, rate what you think the outcome would be by using the following scale?____

0	10	20	30	40	50	60	70	80	90	100
very negative					neutral					very positive